

# Informatics

AN e-GOVERNANCE PUBLICATION FROM NATIONAL INFORMATICS CENTRE



## Launch of Centre of Excellence for Data Analytics **CEDA**

- Jind, Haryana
- e-Niyamtran
- Goa GST System
- e-Abgari
- Chatbot framework for e-Gov
- WebGL and Three.JS

## PATRON

NEETA VERMA

## ADVISORY PANEL

Rama Nangpal

G K Gaur

Nagesh Shastri

Nandita Chaudhri

## EDITOR

Mohan Das Viswam

## ZONAL EDITORS

Dr. Dibakar Ray

Reuban K

Kavita Barkakoty

Sarbjeet Singh

A. K. Dadhichi

## WEB VERSION

Lokesh Joshi

Shashi Kant Pandey

Pankaj Kumar

## CONTENT & DESIGN SUPPORT

Archana Sharma

Rohit Maurya

Chinki Budhiraja

## PRINT, CIRCULATION & DISPATCH

Sudershan Singh Balouria

Anita Arora

Anita Bhardwaj

## PUBLISHED BY

National Informatics Centre

Ministry of Electronics & IT

Government of India

A-Block, CGO Complex, Lodhi Road

New Delhi-110003

INDIA

## PRINTED AT

CHANDU PRESS

469 FIE, Patparganj Industrial Estate

NEW DELHI-110092

INDIA

India has made great strides in e-Governance at a global level. The e-Government Development Index (EGDI) 2018 survey of the United Nations indicates the nation claims 96th position among 193 countries after having been ranked 118 in 2016. Hearteningly, on the E-Participation (EPART) Index too, India's rank has progressed from 27 to 15 among 193 countries. This impressive progress is a result of focused efforts from key stakeholders including National Informatics Centre and Department of Administrative Reforms & Public Grievances who have spearheaded strategic initiatives to enhance delivery of online services to citizens, and merits consistent performance to continually keep improving India's status on the global platform.

Realizing how important and empowering a good understanding of data can be in solving complex data-intensive social and economic issues, NIC has always been at the forefront of developing digital tools and techniques that help provide a clear and insightful look into volumes of data that emerge in a nation of over a billion citizens. The launch of Centre of Excellence for Data Analytics (CEDA) is an affirmative step in the direction of strengthening India's capabilities in gathering and analyzing public data with the ultimate aim of devising effective public service schemes and improving citizen service delivery.

The *Spotlight* section of this issue covers the Launch of Centre of Excellence for Data Analytics (CEDA). The other articles featured in this section are the launch of Web Portal for commemorating 150th Birth Anniversary of Mahatma, India-Uzbekistan pact for collaboration in IT sector, and inauguration of NeVA National Orientation workshop. Jind of Haryana has been featured in the *District Informatics* section. Articles covered in the *e-Gov Products & Services* are e-Niyamtran, Pehchan, Haryana Social Security Pension Scheme, GOA Goods & Services Tax (GST) System, Integrated Fertilizer Management System (iFMS) and e-Abgari. *Appscape* of this Issue showcases 7 prominent and feature-rich Apps developed by NIC recently. The sections such as *Accolades* and *In The News* are here for you as always.

Improving the quality of *Informatics* is our continual effort. Your feedback, would be of much value. Please do write to us.

Wishing you a fabulous season ahead.

Editor

---

## INFORMATICS

379, A4B4, Floor-3, National Informatics Centre

A-Block, CGO Complex, Lodhi Road, New Delhi- 110 003

Phone: 011-24305365, Email: [editor.info@nic.in](mailto:editor.info@nic.in)

# CONTENTS

- 01 Cover
- 02 Editorial
- 03 Contents

## SPOTLIGHT

- 04 Hon'ble Minister (E&IT) launches Centre of Excellence for Data Analytics (CEDA)
- 07 Launch of Web Portal commemorating Mahatma's 150th birth anniversary
- 08 India signs pact with Uzbekistan for collaboration in IT sector
- 10 Inauguration of NeVA National Workshop & Launch of the new website of MoPA



## DISTRICT INFORMATICS

- 12 Jind District, Haryana



## E-GOV. PRODUCTS & SERVICES

- 15 e-Niyamtran, Assam
- 17 Rajasthan's 'Pehchan'
- 21 Direct Benefit Transfer, Haryana
- 24 GOA Goods & Services Tax (GST) System
- 27 Integrated Fertilizer Management System
- 30 e-Abgari

## TECHNOLOGY UPDATE

- 34 Chatbot Framework for e-Gov
- 36 WebGL and Three.JS

## 38 APPSCAPE



## 42 ACCOLADES

## 44 IN THE NEWS



# Shri Ravi Shankar Prasad launches Centre of Excellence for Data Analytics

## Hon'ble Minister also inaugurates DigiVAARTA and Workshop on Data Analytics in Government



Hon'ble Union Minister of Electronics & Information Technology, Shri Ravi Shankar Prasad launched the Centre of Excellence for Data Analytics (CEDA) on 28th September, 2018 at a vibrant function held at India Habitat Centre, New Delhi. The ceremony was presided over by Shri S.S. Ahluwalia, Hon'ble Minister of State (E&IT), Shri Ajay Sawhney, Secretary (MeitY), Shri Pankaj Kumar, Additional Secretary (MeitY), Dr. Neeta Verma, Director General (NIC) Shri MK Mishra, Managing Director (NICS) and several dignitaries from the government, industry and academia. A workshop on Data Analytics in Government was also held following

the inaugural function.

National Informatics Centre (NIC), as a premier ICT solution provider to the government at all levels, has always taken key steps to introduce the latest technologies and services in the government. National Informatics Centre Services Incorporated (NICS) is an enterprise under NIC and has supported NIC's initiatives through provisioning of resources, and establishing & managing ICT infrastructure. Recognising the emerging digital ecosystem and the challenges, and opportunities it offers to Government as a whole, NIC and NICS have jointly set up CEDA to support government departments to unlock the hidden potential of the data that they are

generating as part of governance processes and use it to improve overall governance.

### GENESIS OF CEDA

Rapid digitization of various government functions and services under the government of India's flagship Digital India programme has led to a swift upsurge in the creation of data. Data analytics and its potential integration with policy making can act as major drivers of improved governance. Data Analytics technologies present a compelling opportunity to bring data from across department silos to get a more comprehensive picture of the development goals of the government. Just as scores of governmental and corporate bodies have reaped the benefits of effec-



Lighting of the ceremonial lamp at the inaugural session



**Shri Ravi Shankar Prasad**  
Union Minister  
Electronics & IT and Law & Justice

tive data analytics all over the globe, the Government of India Departments could provide better and more meaningful governance if they have an efficient data analytics system in place. This will help improve quality of service, planning and monitoring, and various other aspects of governance.

### SCOPE

CEDA will provide data analytics services to the government and help in solving



**Shri S S Ahluwalia**  
Minister of State  
Electronics & IT

complex policy issues through data-driven decision making so as to ensure an effective formulation and implementation of various development initiatives that will ultimately benefit the citizens.

CEDA proposes to establish strong partnerships with academia and industry to ensure that the cutting-edge technologies and quality expertise are brought in to help the government take advantage of the booming analytics wave. The centre

also proposes to build tools and technologies, in collaboration with academia and industry, to provide quality tools at a much lower cost to the government.

CEDA will offer following services to the government:

### Data Quality Assurance Services

The Centre of Excellence for Data Analytics will provide data profiling tools and techniques and necessary expertise to analyse the data for quality issues. While data cleaning shall be done for making the data ready for analytical use, recommendations shall also be given in order to help the department take necessary actions to further improve their data collection processes.

### Custom-built Solutions

Build data analytic solutions, specific to a particular problem relating to one or more departments.

### Develop reusable assets

Build Data Analytic solutions that address generic data analytics problems prevalent across departments or states. Such solutions will then be made available to other departments/ states as pre-built



**Shri Ajay Sawhney, IAS**  
Secretary, MeitY



**Shri Pankaj Kumar, IAS**  
Additional Secretary, MeitY



**Dr. Neeta Verma**  
Director General, NIC



Release of the brochure on Data Analytics in Government





D C Misra, DDG  
NIC



P K Bhardwaj, IPS  
AGMUT



S K Mathur, IPS  
UP



Gopalakrishnan S, IAS  
MeitY



Dr. B N Shetty  
CTO, MHA



Neel Ratan  
Managing Partner, PWC (Asia)



Manoj Kumar Mishra  
MD, NICS



Rama Hariharan  
Head, CEDA



Audience at the launch ceremony



analytic solutions that can be operationalized at a cost effective and faster rate.

### Knowledge Management

CEDA will implement a knowledge repository to collect learnings from across projects and share best practices across initiatives. It will enable the usage of best practices across the government.

### Capacity Building & Self Service Analytics

CEDA will train and enable the departments to do self-service analytics by simplifying the data in a manner in which an administrator can use it with minimum technical support.

### Change Management

CEDA will help ministries and departments in assessing impact from the analytics solutions and support in understanding changes to organisational roles and responsibilities.

### OTHER HIGHLIGHTS

#### Launch of DigiVAARTA App

DigiVAARTA App was launched to accelerate the access and enable financial and social inclusion by familiarizing the citizens on various schemes and programmes. Also featured in the App are chats, audio-video tutorials etc. DigiVAARTA App would also spread the awareness on DigiDhan, BHIM's

barcode-based merchant payment mode with merchants and traders at large.

### Workshop on Data Analytics

The second part of the event was a workshop on Data Analytics in Government. The workshop was actively attended by participants from the government, industry and academia. The workshop panelists included Shri DC Misra, DDG (NIC), Shri PK Bhardwaj, IPS, Shri SK Mathur, IPS, Shri Gopalakrishnan, IAS (MeitY), Shri BN Shetty, CTO (MHA) and Shri Neel Ratan (PWC-Asia).

With inputs from  
**RAMA HARIHARAN, HEAD(CEDA)**

# Hon'ble President of India launches Web Portal for commemorating 150th Birth Anniversary of Mahatma Gandhi



Launch of Web Portal, <http://gandhi.gov.in> by Hon'ble President of India



Hon'ble President of India, Shri Ram Nath Kovind has launched the web portal <http://gandhi.gov.in> for commemorating the 150th birth anniversary

of the Father of our Nation, Mahatma Gandhi on 18th September, 2018 at Rashtrapati Bhawan, New Delhi. Dr. Mahesh Sharma, Hon'ble Minister of State for Culture (Independent Charge) and Environment, Forest & Climate Change and Shri Arun Goel, IAS, Secretary (Ministry of Culture) were also present on the occasion. During the event, the commemoration logo was also released by the Hon'ble President, along with the Minister.

Salient features of the new web portal include:

- To identify visitors from different geographical areas and provide them with personalized information.
- To enable organisations & individuals to join celebration and submit their Karyanjali through an easy uploading process.
- To disseminate information related to Gandhian literature, philosophy, audios, videos, rare photos etc., available on the portal.

The web portal is participatory in nature and all the participating organisations will be able to upload their activities regarding commemoration. It also has a unique feature **Gandhipedia** which will be a repository of Gandhian knowledge and continue to grow with time.

The two year-long celebrations from 2nd October, 2018 to 2nd October, 2020 will be held all over the country and across the globe to mark the 150th birth

anniversary of Mahatma Gandhi. All Ministries/ Departments of the Government of India, States and Union Territories have initiated actions pertaining to their respective Ministries/ Departments. Necessary action plans are being uploaded at the web portal.



Logo for commemoration of 150th birth anniversary of Mahatma Gandhi

National Informatics Centre has provided technical support, consultancy, guidance and assistance in conceptualising, designing and development of this web portal which includes cloud management. This citizen centric web portal has been developed using open source technologies which include Linux Redhat 7.3, Apache Tomcat 9.0, Database PostgreSQL-10.0, Java, Jsp, HTML, Javascript, jQuery, Angular5, Bootstrap and CSS.

By **PREM KUMAR, NEW DELHI**



Release of Logo by Hon'ble President of India



# India signs pact with Uzbekistan for collaboration in IT sector

## Agreement made between NIC and e-Government System Development Centre, Uzbekistan for cooperation in e-Governance



Director General, NIC and Deputy Minister of Development of IT & Communication, Uzbekistan exchanging an agreement for bilateral cooperation in ICT sector in the august presence of Hon'ble Union Minister Electronics & IT, Law & Justice & dignitaries from Uzbekistan Government

India has long been a torch bearer for promoting cooperation among countries on the areas of development such as science and technology that enables the involvement of all countries' citizens in the arrangement to lead enriched lives.

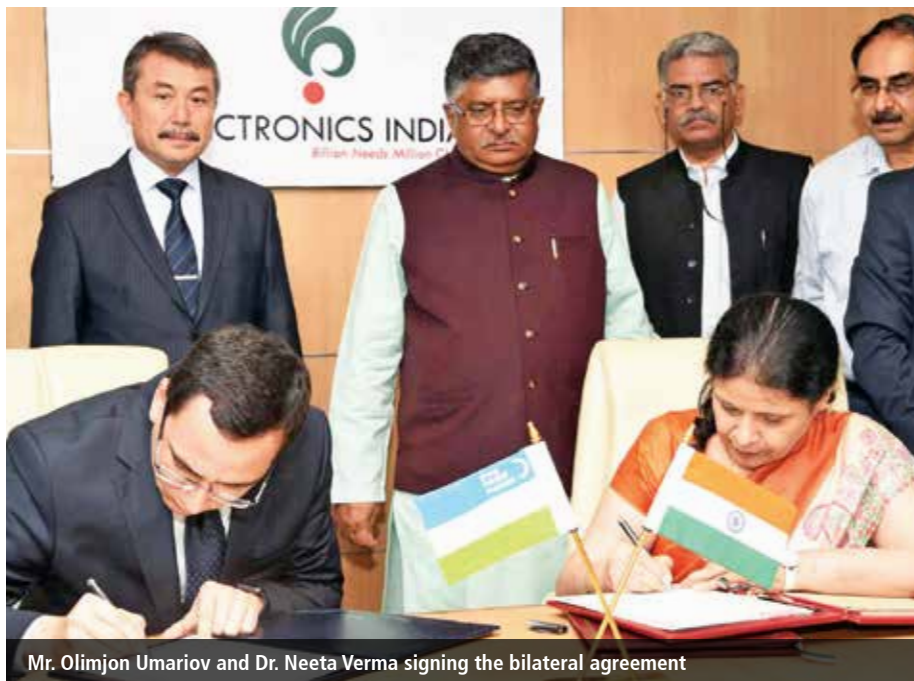
In furtherance of India's collaborative external affairs policy, an agreement between the National Informatics Centre, the Ministry of Electronics & Information Technology (MeitY), the Republic of India and eGovernment System Development Centre, the Ministry for Development of Information Technologies and Communications, the Republic of Uzbekistan was signed on cooperation in the

area of e-Governance on September 28, 2018 at New Delhi for a period of 3 years. From NIC, Dr. Neeta Verma, Director General and from Uzbekistan, Mr. Olimjon Umariov, First Deputy Minister, signed the agreement in the august presence of Hon'ble Union Minister of Electronics & IT and Law & Justice, Shri Ravi Shankar Prasad and H.E. Mr. Shuhrat Sadikov, Minister for Development of Information Technologies and Communications, Uzbekistan.

This agreement sets forth the framework for cooperation between both the organisations in the development of e-Government through exchange of experience, research, knowledge and modern methods and improving public administration broadly in following areas:

- Knowledge and experience sharing on emerging trends, practices, and prospective view on e-Government necessary for further development of e-Government and policy implications
- Cooperation on extending public services, enhancing transparency, promoting decentralised planning and management, resulting in better efficiency and accountability, to accelerate delivery of e-services in the country while optimising ICT spending of the Government
- Establish cooperation in the implementation and roll out of NIC generic configurable eGovernance products/services in various sectors
- Knowledge sharing on standards and





Mr. Olimjon Umariov and Dr. Neeta Verma signing the bilateral agreement



H.E. Mr. Shuhrat Sadikov, Minister for Development of IT & Communications, Uzbekistan and Shri Ravi Shankar Prasad, Hon'ble Union Minister of Electronics & IT and Law & Justice, India



Bilateral discussions of the delegates from Uzbekistan and India

policies for an effective implementation of e-Government systems such as enterprise solution architecture, interoperability, metadata and open government data.

- Develop joint projects within the framework of e-Government for further expansion of fields of cooperation
- Sharing best practices in organisational management based on successful experiences of NIC
- Sharing expertise in other areas of mutual interest, related to e-governance falling within the scope of this agreement

The terms of the agreement are proposed to be achieved by extending support ranging from planning to improving of online public services by adopting Enterprise Architecture and Business Process Reengineering (BPR) techniques for sustainable outcomes. Infrastructure shall be enhanced based on state-of-the-art cloud technologies, such as Platform as a Service (PaaS), Infrastructure as a Service (IaaS), Software as a Service (SaaS) and Storage as a Service (STaaS), and existing resources will be optimally utilised after learning from India's experience in the setup and operation of data centres.

Study tours, training sessions, seminars, and webinars are envisaged to be conducted for sharing knowledge with the Government of Uzbekistan and public sector officials. Reciprocal exchange of publications and scientific research outputs is also envisaged to help meet the desired objectives of the agreement.

-With inputs from **IPS SETHI, NEW DELHI**

# Inauguration of NeVA National Workshop and launch of new website of Ministry of Parliamentary Affairs (MoPA)



Hon'ble Minister of State, Shri Arjun Ram Meghwal during the inaugural ceremony of NeVA Workshop

Dr. Neeta Verma delivered the keynote address and spoke on the various mission mode projects implemented successfully by National Informatics Centre. Dr. Verma also appreciated NeVA and pointed out the salient features of the application. She also invited officials of all the Houses to come on board NeVA and utilise it to its fullest.

Hon'ble Minister of State, Shri Arjun Ram Meghwal also administered the Swachhata Pledge to 200+ delegates, which included senior officers from Secretariats of Lok Sabha, Rajya Sabha, NIC, 31 Legislative Assemblies and 7 Legislative Councils from across the country.

## About NeVA

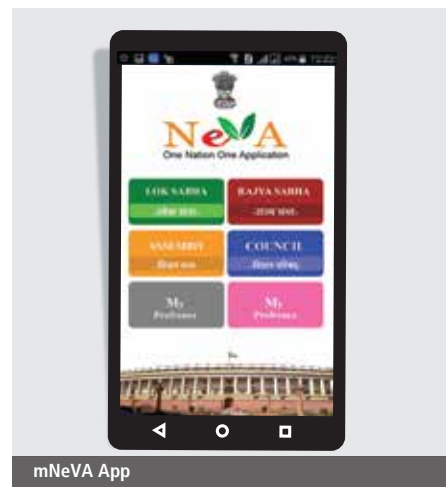
NeVA is a work-flow system deployed on Cloud (MeghRaj) which helps the Chair of the House to conduct the proceedings of the House smoothly, Hon'ble members to carry out their duties in the House efficiently and to conduct legislative business of the House in a paperless manner. mNeVA is the user friendly mobile App of NeVA which is available on Android as well as on iOS. mNeVA has made information on the conduct of business in Legislatures accessible anytime, anywhere to everyone.

The inauguration of two-day National Orientation Workshop on National e-Vidhan Application (NeVA) and the launch of Ministry of Parliamentary Affairs' (MoPA) new website, built on Content Management Framework (CMF) were held at the Parliament Library Building on 24th and 25th September 2018. Hon'ble Union Minister of State for Parliamentary Affairs, Water Resources, River Development and Ganga Rejuvenation, Shri Arjun Ram Meghwal presided over the inaugural session of the workshop, organised by MoPA. Shri SN Tripathi, IAS, Secretary (MoPA), Dr. Neeta Verma, Director General (NIC), Dr. Satyaprakash, IAS, Joint Secretary (MoPA), Smt. Nandita Chaudhri, DDG (NIC), Shri NS Arneja, DDG (NIC) and Shri Mohan Das Viswam, Sr.TD (NIC) and Head (CMF) were among those present during the inaugural session.

During the ceremony, Hon'ble Minister also launched the new website of MoPA, which has been built on Content Management Framework (CMF), an open source platform for standardising the government websites. CMF has been developed

by NIC under the Digital India Programme and is envisaged to cover the Central Ministries and Department websites. The new site is enabled with a number of features including access to person with disabilities, mobile responsive, ease of navigation and simplified content updating facility.

In his welcome address, Secretary, MoPA briefed about NeVA. He appreciated the Legislative Houses of Madhya Pradesh, Punjab, Uttar Pradesh, Karnataka, Kerala, Puducherry and Manipur for having started using NeVA.







Hon'ble Minister of State, Shri Vijay Goel addressing the delegates and participants during the valedictory ceremony of NeVA National Workshop



### NeVA Workshop

The Orientation Workshop included technical sessions and group discussions over 2 days, which facilitated exposure for the delegates to the attributes of NeVA; deliberations on issues faced by different State Legislatures in implementation of NeVA and finding solutions thereof. The focus of the workshop was to encourage all State Legislatures to move towards NeVA platform and bring in transparency, accountability and responsiveness in their conduct of business, through the use of technology.

From NIC, Smt. Nandita Chaudhri, DDG, Shri N S Arneja, DDG, Shri P Alfred, Sr.TD and Shri Deepak Shirahatti, Sr.TD were amongst the presenters on various aspects of NeVA.

### Valedictory Ceremony

Concluding session of the two-day long workshop was presided over by the Hon'ble Minister of State, Parliamentary Affairs, Shri Vijay Goel on 25th September 2018 at Parliament Library Building. The CEO of NITI Aayog Shri Amitabh Kant, IAS, also addressed the audience.

Shri Vijay Goel gave away certificates to



the delegates. During his speech, the Minister said, "There is a requirement of many changes in the functioning of Parliament." Shri Amitabh Kant said, "The information is power and simpler and easy to use systems are the need of the hour so that the citizens can easily get all the information they need." The workshop concluded with vote of thanks by Dr. Satyaprakash, Joint Secretary (MoPA)

NeVA covers, among other areas, List of Business (LOB), Notices, Bulletin-I, Bulletin-II, Starred/ Un-starred Questions including reply by the Departments (Q&A), Bills: Introduced/ under Consideration & Passing, Synopsis of Proceedings, House Proceedings-Verbatim, Committees Reports, Assurances, Rules & Procedures, Digital Library, Provisional Calendar, Reference material, Rotation of Ministries, Contacts, Press Releases etc. The application would host a secure page for each Member of the House for submitting questions & other notices.

A trial run of NeVA has been conducted for Rajya Sabha and Lok Sabha. Punjab, Uttar Pradesh, Bihar, Tamil Nadu, Sikkim, Madhya Pradesh, Karnataka, Kerala, Puducherry and Manipur Assemblies have started using the application. Regular training programmes through video conferencing are being conducted for all the Houses. State level NeVA workshops have been organised in Punjab, Telangana, Sikkim, Karnataka and Bihar.

By **DEEPAK SHIRAHATTI, NEW DELHI**

# JIND DISTRICT, HARYANA

## Delivering innovative ICT Solutions to foster excellence in e-Governance

The NIC District Centre has enhanced accessibility and delivery of various government services to the citizens. Apart from dedicated ICT support to the District Administration, NIC Jind has pioneered many successful ICT initiatives that have improved the citizen experience.



**DEEPAK BANSAL**  
Sr. Tech. Director & SIO  
deepak.bansal@nic.in



**M Z R BADAR**  
Tech. Director & DIO  
mzr.badar@nic.in



**SANJEEV KUMAR**  
Scientific Officer & ADIO  
sanjeev.kumar85@nic.in

Edited by  
**SARBJEET SINGH**



According to the history of the town, the Pandavas built a temple in honor of Jainti Devi and offered prayers for their success in battle against the Kouravas. The town grew up around the temple and was named Jaintapuri, (abode of Jainti Devi) which in course of time metamorphosed to Jind. Now, the district comprises of 4 Subdivisions, 6 Tehsils, 1 Sub-Tehsil, 8 Blocks and 306 Villages.

The establishment of NIC District Centre led to tremendous growth in the field of e-governance thereby improving the accessibility and delivery of various government services to the citizens. Apart from dedicated ICT support to the administration, NIC Jind has pioneered many successful ICT initiatives that have improved the citizen experiences. District Website (<https://jind.gov.in>) has been redesigned with S3WAAS compliance and is bilingual.

### SOFTWARE DEVELOPMENT ACTIVITIES

#### Agriculture Input License Information System

A Dot-Net and SQL server based solution was designed and developed for the Agriculture Department for Issuance of Licenses for seeds, fertilizers and insecticides as a module of e-District. These were included in the Compendium "Good Governance through e-Services" published by MeitY in December 2015. These services are also being redesigned for the SARAL-Haryana single window system which is an instance of Service Plus.

#### Mobile Apps

NIC District Centre, Jind has developed various Android based mobile apps:



“

The State-of-the-Art ICT Services provided by NIC District Centre, Jind and commitment towards finishing the assignment in a time bound and professional manner had played a significant role in successfully implementing e-governance projects. The single window system SARAL Haryana portal is a remarkable solution given by NIC, which will provide 600+ services and schemes through a single platform. The continuous capacity building of staff has radically changed the delivery of citizen-centric services and improvements in overall working.

I was delighted to know that in addition to the dedicated support to the district, NIC Jind officers are part of State Development Team and are actively involved in web and mobile application development and providing continuous support to other districts of the State also.

**AMIT KHATRI, IAS**  
Deputy Commissioner  
Jind, Haryana

”





e-Girdawari Mobile App

- **Birds of Bhindawas:** Mobile app for bird lovers with the details of the bird species in the area containing audio-visual bird gallery.
- **Jind - Flowing Water Forgotten History:** This app is based on the coffee table book on history of Jind including its heritage, culture, architecture, sculpture and tirthas.
- **E-Girdawari:** Khasra Girdawari (Harvest Inspection) is an important activity, which is to be carried out by Revenue Department at least two times a year and

special Girdawari is also held as and when exigency arises. During the NIC Innovation Challenge 2018, this app was conceptualised and developed. The app is now being used for e-Girdawari throughout the state. e-Girdawari will also help in the verification by senior revenue functionaries as crop photo and GPS are also captured which ensures that the survey has actually been done in the field.

- **Rainfall and Disaster Reporting App:** The app was designed and developed for Revenue department for instant reporting

of rainfall and disasters. The instant reporting facilitates decision making.

## E-GOVERNANCE INITIATIVES AND SERVICES

### Antyodaya SARAL Haryana Portal

It is a unique endeavour of implementing citizen centric portal with the vision of enabling all the 600+ services and schemes delivery through one common platform. Nowhere in the country such a massive effort has taken place. The dream of State Government to provide simple, all-inclusive, real-time, action oriented and long lasting governance with features like faceless, paperless and cashless service/ scheme delivery model is realised and made operational by NIC Haryana State Office. Saral has two components Antyodaya Saral Portal and Antyodaya Saral Dashboard. Portal provides the facility to avail service/ schemes from anywhere anytime basis, live tracking/ status of service, timely delivery of service and complete digitization of citizen services/ schemes availed. The Dashboard facilitates the authority to review performance State-wise, District-wise and service/ scheme wise, escalation of requests. It is monitoring right to service time-lines and also giving the saral score based on the delivery within time-lines.

### DILRMP/ Web HALRIS

Under the Digital India Land Record Modernization Program, a complete Integrated Work-flow based HARIS#HALRIS system has been implemented in the District. The District HQ Tehsil is migrated on the Web HALRIS system which has features such as Appointment Management System, eStamping and eKYC. District Jind was also selected as National Pilot District for Consent-based Aadhaar-linked Land Records System. The Proof of Concept was conducted successfully in two villages of District Jind and eKYC for deed registration has already been rolled out throughout the State of Haryana.

### Vahan & Sarathi

Web Based Vahan (Ver. 4.0) and Sarathi (Ver. 4.0) are implemented in 4 Subdivisions and 1 RTA Office of the District.



District Jind Website Home Page



Saral Kendra Jind

### e-GRAS/ e-Stamping/ e-Billing

The umbrella of services of Finance Department like eGRAS for Government Receipt Accounting System for online Payments or Challan Generation for depositing the government fees, eStamping for generating electronic stamp for various services like Deed Registration, affidavit etc., eBilling for generating Treasury Bill for payment from different departmental budget heads are implemented in the District.

### HRMS

Human Resource Management Services is implemented in all the departments of the State Government where all the service record like Service Book, Leaves, Transfer, LTC, Disciplinary Actions and loan & advances are stored. The salary is generated in integration with the IFMS system.

### IVFRT

Immigration Visa, Foreigners Registration and Tracking system has been implemented at the SP Office, Jind.

### NSAP

Computerization of beneficiaries under the National Social Assistance program is implemented and Aadhaar seeding for DBT work is completed in the district.

### Other projects

Haryana Certificate Information System (HARCIS), AGMARKNET, NADRS, MEDLEAPRS (Medico Legal Examina-

tion & Post-mortem System), PriaSoft, CCTNS, Revenue Court Cases Monitoring System, GeM, Jeevan Pramaan Patra, NDAL/ ALIS etc. are the other supported projects in the District.

## INFRASTRUCTURE AUGMENTATION

The NIC District Centre is equipped with state-of-the-art NICNET infrastructure having 1Gbps NKN link to NIC Hisar & NIC Sonapat. The facility is currently being used by more than 180 nodes 24x7x365. Two dedicated VC Studios and a separate training/ data entry lab has also been established.

### Video Conference

Two Separate video conferencing rooms have been setup with a seating capacity of 15 and 50 persons respectively.

### SARAL Kendras

4 state-of-the-art single window citizen service centres have been setup by revamping e-Disha centres and branded as SARAL Kendras by the State Government. The infrastructure is upgraded to have 23 counters at District HQ kendra and 15 at Subdivision level kendras. In these Kendras, single portal saralharyana.gov.in is being implemented which is maintained and supported by NIC HRSC.

### Wifi Hotspot

NIC has established NICNET based wifi in both buildings of Mini Secretariat which has NIC's Vayu, Lehar, SARAS,

Athithi and Anant SSIDs to access internet for the registered users.

## IEC ACTIVITIES

**Digital India Programs:** An extensive campaign for promoting Digital payment methods, Digital lockers, IT Act, Cyber security were carried out on various occasions like the Digital India Week Celebration, Digital India Outreach campaign, International Gita Mahotsav, Krishi Basan Melas, Digi Dhan Mela and through tableaux on Republic day celebrations. District Jind has demonstrated exemplary performance in CSC services, PMGDISHA and Aadhaar services.

## AWARDS AND ACCOLADES

The efforts and initiatives of NIC District Centre, Jind were appreciated at District, State & National level on various occasions. District Jind was awarded 2nd position in the State for Digital India Week Awards 2015. NIC District Centre, Jind officials were awarded with certificates of appreciation for NIC Innovation Challenge, 2018 under Mobile App category.

*For further information, please contact:*

#### DISTRICT INFORMATICS OFFICER

NIC Jind District Centre  
Police Lines, Jind - 126102  
HARYANA

Email: [diojnd.hry@nic.in](mailto:diojnd.hry@nic.in)  
Phone: 01681-249331



# e-NIYANTRAN

## Online Time Card System to save the migrating wildlife of Assam's Kaziranga National Park

e-Niyantran will replace the existing Manual Time Card System of regulating the vehicular movement on NH-37, the highway which runs parallel to the southern boundary of Kaziranga National Park. The system would help avoid accidental death of wild animals while they cross the highway, especially during migration.



**ABHIJIT KAKOTY**  
Scientist- B  
(DIO, Golaghat)  
a.kakoty@nic.in



**JAYANTA KUMAR NATH**  
Scientist- B  
(ADIO, Sonitpur)  
jk.nath@nic.in



**SUSHRUTA RAJKHOWA**  
Scientific Officer  
(ADIO, Golaghat)  
s.rajkhowa@nic.in

Edited by  
**KAVITA BARKAKOTY**



Golaghat District was carved out of the erstwhile Jorhat District in 1987. Located in the Upper Assam region, Golaghat has been witness to many political, historical and cultural events of significance. The NIC Golaghat District Centre was established in the year 1990 and since then, it has played a vital role in achieving proactive governance through the use of ICT.

The Kaziranga National Park (KNP) is situated on the northern bank of the Brahmaputra River covering a core area of 482 sq km and a buffer area of 548 sq km in the districts of Golaghat and Nagaon. The sanctuary, which hosts two-thirds of the world's great one-horned rhinoceroses, is a World Heritage Site, and an amazing abode of precious flora and fauna. The national park also boasts of having the highest density of tigers among protected areas in the world.

### PROJECT PROFILE

During the flood season, when the River Brahmaputra pours into Kaziranga's grasslands, the wild animals are forced to migrate to the hills of nearby Karbi Anglong by crossing the National Highway-37 which runs parallel on the southern boundary of the park. Many wild animals are accidentally killed while attempting to cross the NH-37 by speeding vehicles.

The National Park authorities have introduced a Time Card System to regulate vehicular movement on the NH-37 to ensure safety of the animals. Temporary check-posts have been set up at several places along the highway, including the animal corridors. All

vehicles are issued a Time Card which mentions the time of entry of the vehicle at the starting check-post, and the time it should take to reach the intermediate posts and the final check-post at the other end. The Time Card is finally collected at the last exit check-post. All these were being done manually. After various discussions with the Golaghat District Administration and the District Forest Office (DFO), Eastern Assam Wildlife Division (EAWD), it was felt that the manual Time Card System should be replaced with a digital Time Card System to improve functioning and to facilitate better decision-making. This is the origin of Project e-Niyantran, an Online Time Card & Analytics System, which will be implemented as a pilot project during the coming flood season. The project implementation area, Kaziranga National Park, possesses a difficult terrain and, combined with the poor Line of Sight due to thick forest cover, poses a major challenge in implementing ICT projects.

### PROJECT COMPONENTS

- Android mobile application to capture vehicle details and issue Electronic Time Card using SMS (SMS will be sent to driver/ passenger and officials posted at intermediate and exit check gates).
- Web application with Dashboard for Department officials for user management, vehicle monitoring and MIS Reports.
- Integration with NIC's standard national transport applications; Vahan & Sarathi.

### PROJECT IMPLEMENTATION

Development of the Mobile App and the Web Application has been completed. The system is currently undergoing security audit at Centre of Excellence for Application Security, Guwahati. (Snapshots of the system are given in figure 1 and figure 2)



Fig.1 Mobile App Interface



Fig.2 Web Application Dashboard

the NIC team. After carrying out successful testing from the Amguri check gate to the Kohora OP check gate on NH-37, the team moved to the DFO office, where a short discussion on implementation strategy was held.

## TRAINING OF MASTER TRAINERS FOR E-NIYANTRAN PROJECT

Training of Master Trainers for the Kaziranga Time Card System Project (e-Niyantran) was organized at the office of the Deputy Commissioner, Golaghat on August 13, 2018. The training was imparted by DIO and ADIO, NIC Golaghat in the presence of Shri Shyamal K Gogoi, Additional Deputy Commissioner (e-Governance). Four Master Trainers (Forester I Grade) participated in the training programme.

## WAY FORWARD

Wildlife is facing increasing threats such as habitat destruction, climate change and illegal wildlife trade and is to be conserved for generations to come. The project e-Niyantran is a low cost initiative to support and augment wildlife conservation efforts in the Kaziranga National Park.

The Government of Assam and KNP authorities have been taking initiatives to involve local people of nearby villages in community participation for conservation efforts. A citizen module is also planned to be added in e-Niyantran enable citizens to report animals stranded during floods by posting images and capturing geographical position of the area to expedite rescue efforts. Animals wandering out of the National Park perimeter may also be reported in a similar way to alert the authorities, thus saving them from falling prey to poachers.

For further information, please contact:

**DISTRICT INFORMATICS OFFICER**  
NIC, Golaghat, Bhoga Gaon  
ASSAM - 785621

Email: golaghat@nic.in  
Phone: 0377-4280850

## FIELD TESTING AT KAZIRANGA

A team comprising District Informatics Officer (DIO) and Assistant DIO, NIC and two Assistant Conservators of Forest (ACFs) deputed by the DFO, EAWL had participated in field testing of the e-Niyantran System on July 11, 2018. First, the mobile devices of the ACFs were configured using the Admin portal at the DFO office. The team then moved to the field for testing of the Mobile app at all the four gates starting

from the Amguri check gate located in the Burapahar Range.

The testing covered the very critical network coverage part and live demonstration of the process flow of the app. The app was found to be operational even in 2G network though 3G/ 4G network was also available. The officers expressed their satisfaction at the performance of the app. They also raised several queries which were addressed by



Field Testing at check gates



Training the Master Trainers





# PEHCHAN - Simplifying the Civil Registration in Rajasthan Digitally

Since its inception in 2014, over 1.28 Crore registrations have been done through Pehchan. Citizens are facilitated for applying online and receive digitally signed Registration Certificate by email, and downloadable from the portal. About 12,500 Registrars & Sub Registrars and 1,000 private hospitals use this portal daily for registration purposes and approximately 10,000 registrations are carried out everyday.

**TARUN TOSHNIWAL**  
Dy. Director General & SIO  
tarun.toshniwal@nic.in



**AMIT AGARWAL**  
Technical Director  
amit.agarwal@nic.in

Edited by  
**SARBJEET SINGH**

**B**irth registration is one of the fundamental and vital aspects of the democratic process of a government. It is the recognition of a new member in a society, who is entitled for all the rights and responsibilities of a valued citizen. Similarly important are Death and Marriage Registrations, which entitle a person to receive various citizen benefits. Without an efficient civil Registration System, it is virtually impossible to plan or implement effective development strategies. The Government of Rajasthan, in technical collaboration with NIC has thus introduced the online system of Registration called Pehchan with the objective of having timely registration of Birth-Death and Marriage and effective monitoring of the system.

## ABOUT REGISTRATION

As per the Registration of Births & Deaths Act, 1969, it is mandatory to register every birth/ stillbirth and death with the concerned state/ UT Government within 21 days of its occurrence. The government, accordingly has provided a well-defined system for registration of birth, with the Registrar General at the centre and the Chief Registrars in the States, running through District Registrars and Registrars to the Panchayats and Town Registrars at the periphery. In Rajasthan, Registration of births and deaths is compulsory as per provisions of Registration of Births & Deaths Act, 1969 and Rajasthan Registration of Births & Deaths Rules, 2000. Registration of Marriage is being done under the Rajasthan Compulsory Marriage Registration Act, 2009.

## PROJECT PEHCHAN

The Registrars, appointed by government in every Gram Panchayats and Urban Local Bodies have been earlier carrying out registration of Birth & Death or Marriage manually by entering details in



“Pehchan has smoothened the Civil Registration System in Rajasthan State. We have made it compulsory to use Pehchan portal for the registration of Birth, Death and Marriage in Rajasthan. Residents are hugely benefitted by the digitization of the system. They are now getting digital certificate in their emails and are also able to download it through the Portal. Facilities have been provided to get the certificate from nearby eMitra Kiosks and self-service eMitra Plus kiosks installed at various locations in the state. The system is integrated with various other databases of the State and updates critical Bhamashah Database on daily basis. Digitally signed certificates are issued with the help of Raj e-Sign. I congratulate the NIC team and the team of Economics and Statistics Department, Govt. of Rajasthan for putting in place this IT enabled system.”

**AKHIL ARORA**  
Principal Secretary, Planning and  
IT & Communication  
Rajasthan

registers and issuing paper certificates. The challenges faced in this process such as time delays, inefficiency in monitoring, and lack of transparency have led to the

concept of Pehchan, which is a unified Web Portal for birth, death, still birth and Marriage Registration in Rajasthan. Developed by NIC, Pehchan has the access mechanism to every rural and urban Registrars for registration of Birth, Still Birth, Death and Marriage. This web-based application reaches right up to grassroots level i.e., Gram Panchayat, which is within



“

Pehchan is developed and being implemented with the excellent technical guidance of NIC Rajasthan. Portal is being used to digitize the Birth, Death and Marriage Registrations in the state. Presently, no other system is being used to generate registration certificates in Rajasthan and all rural and urban registrars of the State are on board to Pehchan portal. The system is also appreciated by RGI, Delhi. Citizens are benefited with the digitization of registration system; they can now comfortably apply through Portal or Mobile Apps and speedily receive their comprised certificates. System is also integrated with Bhamashah, Election, Medical department etc. With the help of Pehchan, we aim for the 100% registration in the state. Chief Registrar office is now able to monitor each registration minutely and also able to generate vital statistics on real time basis. I congratulate the NIC Rajasthan team for the system.

**Dr. OM PRAKASH BAIRWA**  
Chief Registrar (Birth-Death) &  
Registrar General (Marriage)  
Rajasthan

”

the convenient reach of every rural citizen. Pehchan aims to reduce information gap between Registrar and Government and to reach the un-reached digitally. It also serves by building up the capacity of the Panchayat for prompt and responsive e-service delivery.

Pehchan has the facilitation of role-based login for Registrars, Sub Registrars, Block Statistical Officer, District Registrars and the Chief Registrar. About 1.26 Crore Registrations have been carried out through the portal so far. The system has been integrated with UIDAI for Aadhaar authentication and has the facility to provide digitally signed/ e-Signed Certificate by Registrars and Sub Registrars. SMS alert is sent to applicant on Registration and digitally signed certificate is delivered to the applicant's email ID. About 941 private hospitals have also been authorized to apply online for registration of the events occurred in their respective hospitals. The Portal also provides about 100 types of monitoring reports to District Registrars and Chief Registrar. Toll free helpline is available to answer the queries of citizens on the registration through the portal.

There are about 10,000 rural and urban Birth, Death and Marriage Registrars in Rajasthan. The Government has also authorized about 2200 medical institutions (PHC/ CHC/ Government Hospitals) as Birth & Death sub-registrars to register the Birth-Death events within 21 days of

occurrence in their respective institutions.

## OBJECTIVES

- ◆ IT enablement of Civil Registration System
- ◆ Timely registration of birth, stillbirth, death and marriage
- ◆ Delivery of computerized certificates
- ◆ Capacity building
- ◆ Monitoring up to grass-roots level
- ◆ Timely Reporting of events online by citizens
- ◆ Timely progress reporting
- ◆ Availability of vital statistics

## STAKEHOLDERS

### Citizens

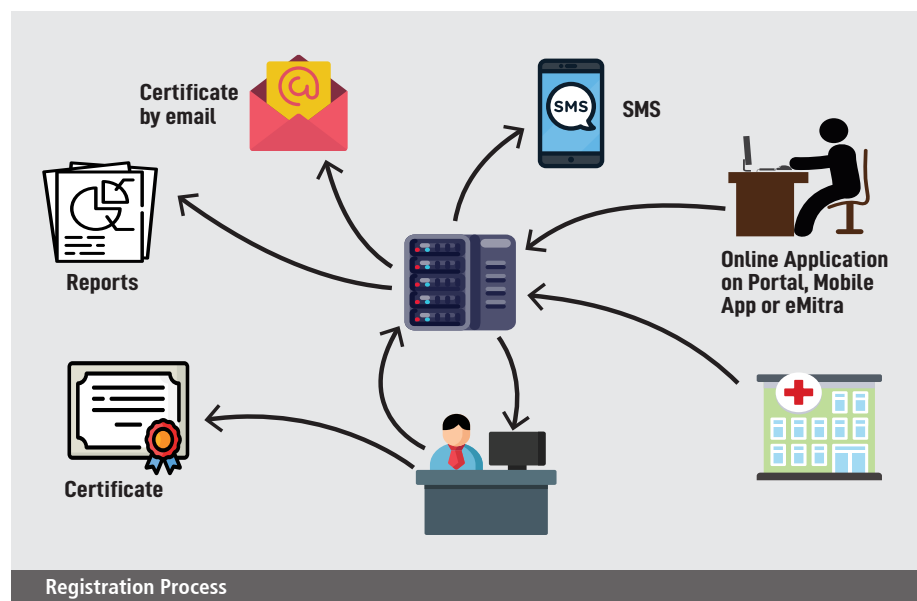
◆ Can apply for registration Online or Offline at Registrar Office. ◆ Track the application/ registration status and download certificate through portal or mobile App. ◆ Take print of the digitally signed computerized certificate.

### Private Hospitals

◆ Authorized to make entry of events occurred in their hospitals without the need of sending the hard copy of event to Registrar Office. ◆ Print Registration Certificates.

### e-Mitra Kiosks

◆ Authorized by Government of Rajasthan facilitate applying online, on behalf of citizens. After registration by concerned registrars, kiosks delivers the





digitally signed certificate to citizens, downloadable from the portal.

### Registrar

- Makes entry of birth, stillbirth, death, marriage on portal and issues certificate.
- Performs correction after approval by District Registrar.
- Add child name and registers adopted child.
- Also makes entry of Legacy Registrations.
- Generates progress report and required statistical report as per the provisions in the Act.

### Sub Registrar

- Registers birth, death, stillbirth within 21 days of the event on portal and issues certificate. After 21 days, registration can only be done by respective Registrar Office.
- Generates progress report and required statistical report as per the provisions in the Act

### Block Statistical Officer

- Monitors registration of events within their block.
- Generates MIS report for speedy and effective monitoring

### District Registrar

- Monitors events within the District.
- Have the authority to approve modifications in the registration requested by Registrar online.
- Generates MIS reports and required statistical reports as per the provisions in the Act

### Chief Registrar

- Overall responsibility for registration of Birth/ Death/ Stillbirth/ Marriage events in the State.
- Proposes enhancement or modification in the registration rules to Government and issue notifications.
- Generates MIS report and various vital Statistics online as per the provisions in the Act.
- Reports vital statistics of State to Registrar General of India (RGI)

### National Informatics Centre (NIC)

- Technical consultant for design, development, hosting and maintenance of the system.
- Advise improvement of services time to time.

## KEY MODULES

### Registration Module

- Facilitates registering birth, death, stillbirth and marriage and generates certificate.

### Legacy Registration Module

- Facilitates registering of the already

registered registration manually or by any other means; with the portal keeping the original registration number intact.

### Baby Name Addition Module

- Facilitates adding baby name, which is applicable for 15 years from date of birth. Portal generates new certificate after addition of baby name.

### Adopted Child Registration Module

- Facilitates registering of an adopted child and provisioning to Registrars, enabling them issuance of Registration Certificate with name of new parents of the child. Child adoption, usually is through an agency or relative.

### Language Change Module

- Facilitates to generate bilingual certificate or to update the language from Hindi to English or vice-versa. Such certificates are necessary for the requirement of Passport etc.

### Widow Registration

- As per norms, a woman, whose husband has expired can make widow registration. The portal has the facility to generate Marriage Certificate by suffixing "Late" to the name of the deceased spouse.

### Reporting Module

- Facilitates role-based logins and hence various reports are generated based on the user role. Nearly 100 reporting formats are prepared and made available to various users.

### Online Applications

- Facilitates the citizens to apply for the registration online from any place; the

module then generates an application form with the unique reference number. The application is then verified and registered by registrar and issues digitally signed certificate.

### Digitally Signed Certificate

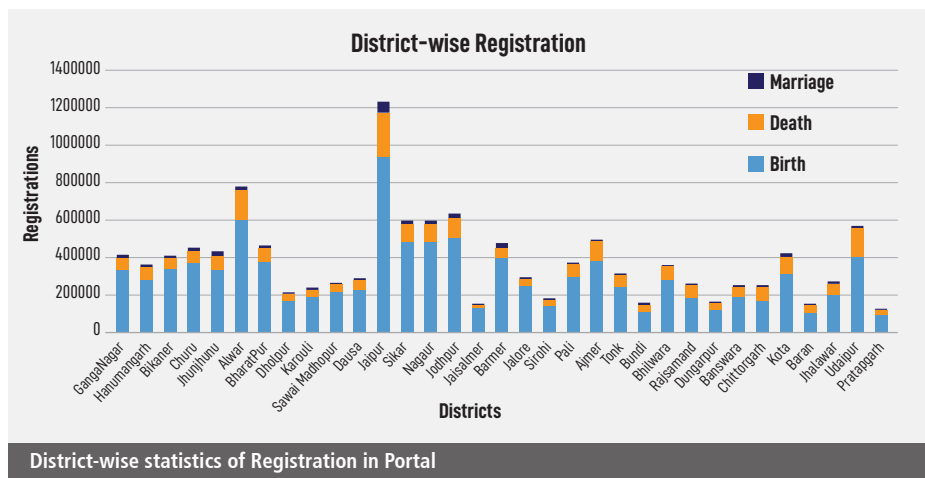
System has the facility to generate digitally signed; dongle based or Aadhaar based e-Signed certificate, which can be downloaded from portal, mobile App or nearest CSC/ e-Mitra kiosks.

### Search Registration

Module allows keeping track of the Registration.

## SALIENT FEATURES

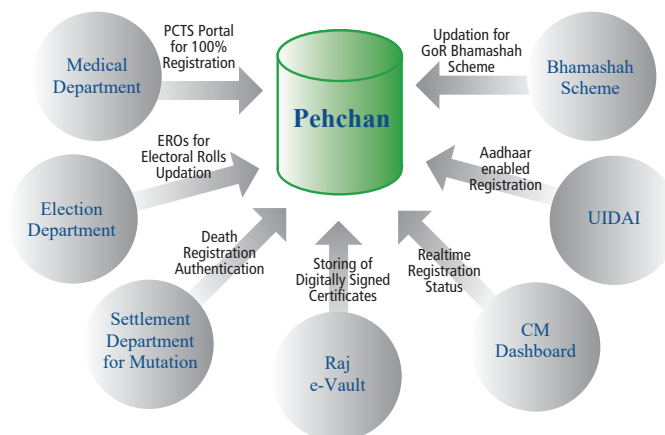
- System can be used as a product by any State & save development efforts
- Unique Registration Number across the State
- Role-based login for Registrar, Sub Registrar, Block Offices, District Registrars and Chief Registrar office
- Option to maintain legacy registration
- Facility for bilingual registration certificate
- Online workflow for selective changes request by Registrar and approval by District Registrars
- Uploading of scanned affidavit and reporting forms
- Periodical progress report
- Periodical checklists and generation of birth-death register
- Facilitates delayed registration only with proper affidavit
- Facilitates Aadhaar enabled registration





Hon'ble CM, Smt. Vasundhara Raje, after launching of Marriage Registration through Pehchan Portal

## INTEGRATION AND DATA USAGES



- Facility to register twin children birth and death
- Facility to register adopted child
- Facility to save draft of registration for Registrar and Sub Registrars
- Option for unclaimed (Lawaris) death registration
- Birth registration of foreign national's child settled in India under Section 20 started
- Facility to register widow registration in marriage
- QR code implementation on all certificates
- PVC birth card facility through eMitra Kiosks
- Certificate repository in Raj eVault
- SMS alert facility for citizens (on application/ objection/ registration)
- SMS alert for the date of physical presence of groom and bridegroom with Registrar office
- Responsive & device friendly portal
- Toll free centralized Helpline
- Online searching of registration by citizens
- Issuance of certificates on same day
- Bilingual registration certificate
- Printing on normal stationary avoiding preprinted stationary
- Quick circulation of instructions, notifications etc. to all Registrars/ District Registrars
- No delayed reporting from private hospitals
- Real-time availability of various vital statistics and MIS to District Registrar and Chief Registrar

with C# and JAVA script using framework 4.0

- Backend database is SQL Server 2012
- Far DR site at Delhi

## MOBILE GOVERNANCE

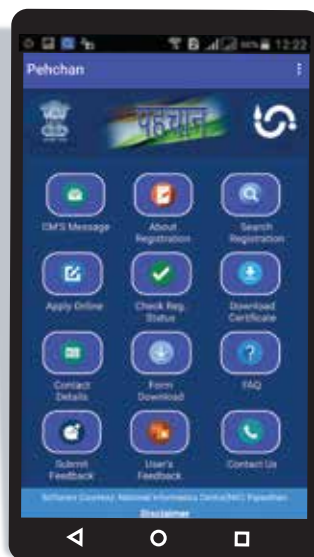
Android and IOS based Apps are available to facilitate citizens to apply through mobile phone, download digitally signed certificate, search registration, application status, forms download etc.

## OUTCOME AND SUCCESS

- Digital service delivery eliminated long queues at Registrar Offices
- Institutional deliveries in government hospitals are registered immediately
- Family gets birth certificate from private hospitals at the time of discharge
- Insurance companies now settles the claims by verifying the death certificate through the QR Code
- Hassle-free marriage registration process
- Enables data analytics of vital statistics
- Convenience of having birth certificate on PVC card

## TECHNOLOGY

- Application is developed in ASP.Net



Pehchan Mobile App

## BENEFITS

- Uniform process of registration across the State
- Transparency in civil registration system
- Minimized duplicity of registration
- Online application facility to citizens through portal and mobile App
- Digitally signed certificate at doorsteps

For further information, please contact:

**STATE INFORMATICS OFFICER**  
NIC Rajasthan State Centre  
8318, NW Block, Secretariat, Jaipur  
RAJASTHAN - 302005

Email: sioraj@nic.in  
Phone: 0141-2227992



# JOURNEY OF BENEFITS TRANSFER IN HARYANA (1966-2018)

## Strengthening and enhancing DBT service in the interest of beneficiaries

The State Government, in 2014 decided to disburse social security pension benefits directly to the accounts of beneficiaries using the concept of "Direct Benefit Transfer". More than 62 Scheduled Banks, their BCAs, Post Offices etc. were engaged for opening, uploading, updating & crediting the beneficiaries' accounts using pensioner database through its online interface using secured tunnel on the Department's website (<https://socialjusticehry.gov.in>)



**DR. SUSHEEL KUMAR**  
Sr. Tech. Director & ASIO  
[susheel.kumar@nic.in](mailto:susheel.kumar@nic.in)



**DHARAMPAL SAINI**  
Scientist-D  
[dp.saini@nic.in](mailto:dp.saini@nic.in)

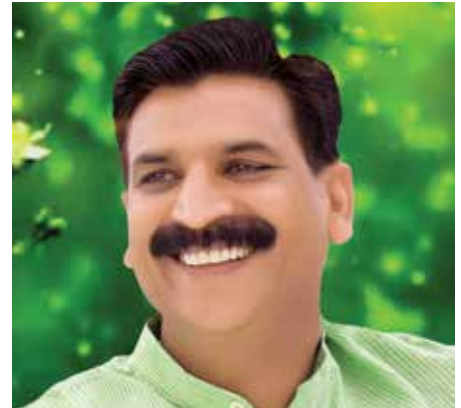


**POOJA TYAGI**  
Scientific Officer  
[pooja.tyagi@nic.in](mailto:pooja.tyagi@nic.in)

Edited by  
**SARBJEET SINGH**



Haryana is one of the northern provinces of India administrated by 22 Districts, 140 community development Blocks, 6752 villages and 89 Urban Local bodies having population more than 2.75 crores. Out of which 8.9% are beneficiaries under Social Security Pension Scheme (SSPS). The State Government has been providing Financial Assistance to the eligible beneficiaries of the state who are unable to sustain their livelihood from their own resources. Benefit disbursement was first started in the year 1964 with the amount of Rs. 15 per month per beneficiary when Haryana was a part of Joint Punjab. At the time of inception of Haryana on 1st November 1966, the amount of pension was increased to Rs. 25 per month per beneficiary. The State Government kept on increasing the SSPS benefits from time to time. Increased rates of pension are shown in Figure-2. In the manual system, records were maintained on paper registers till 2001 and were highly vulnerable, now all the records have been digitized and available online for all concerned. Presently, the pension amount is Rs. 1,800 that is disbursed through DBT to the accounts of more than 25.46 lakh beneficiaries in the form of monthly pension for those who are enrolled under 9 Schemes, namely Old age, Widows, Disabled, Destitute Children, Ladli, Dwarf, Eunuch, Financial Assistance to Kashmiri Migrants & Non school going disabled children of less than 18 years as shown in Figure-1. The annual budget of Financial Assistance has reached up to Rs. 5,433 crore with an average increase of Rs. 50 crore per annum. The State government has already announced and notified that the SSP amount has been increased to Rs. 2,000 month per benefi-



“

Our Government in Haryana is committed for increasing the Social Security Pension benefits from Rs. 1,000 to Rs. 2,000 (with an increase of Rs. 200 per annum) and successfully disbursing as DBT through bank/ post office accounts of beneficiaries. The computerized system of DBT developed by NIC Haryana has helped the Government in saving more than Rs. 200 crore on account of de-duplication, updation and cleaning of pensioners data. I wish all the success to the project and implementing team of NIC, Banks and the Department.

**KRISHAN KUMAR BEDI**  
Hon'ble Minister  
Social Justice & Empowerment Dept.  
Haryana

”

ciary with effect from November 2018.

### **DIGITIZATION & DBT**

As per the system study, prior to web-based, the government used to disburse benefits in cash to the beneficiaries through the accounts of PRIs & Urban Local bodies. Disbursement was based on data maintained in isolation at district level. Cases of fraudu-



“

DBT, on monthly basis, in the accounts of more than 25.46 lakh beneficiaries across the state under Social Security Pension Schemes, has been achieved successfully. It is joint venture of Banks, Post Offices, Department and the NIC. Recently, the system has also been integrated by NIC Haryana team with RGI's database of death registration to flag the affected pension records based on Aadhaar. Haryana is the first state where such integration has been done, so far. I wish all success to the project and to the implementing team of NIC, Banks and the Department. We remain committed to Good Governance for our citizens.

**NEERJA SEKHAR, IAS**  
Principal Secretary  
Social Justice & Empowerment Dept.  
Haryana

”

lent, wrong and delayed disbursement to ineligible beneficiaries were reported continuously. Flagging of deceased, ineligible, disabled, de-duplication, exchange and authentication of beneficiaries and portability of information at different levels was a big challenge, besides maintaining data integrity and security. To overcome such problems, in 2010, data of all beneficiaries was digitized & hosted on central server and online secured access was provided to the officers of department in the field for data updation, processing and disbursement of pension benefits through respective Panchayats and Urban Local Bodies across the state. In November 2014, the State Government decided for Direct Benefit Transfer (DBT) to the accounts of benefi-

ciaries. Scheduled banks, their BCAs, Post offices, m-Paisa (private mobile service provider) were engaged for opening, uploading, updating & crediting of beneficiaries accounts with pensioner database by using their respective online interfaces created on the department's website (<https://socialjusticehry.gov.in>). The portal has been designed, developed and maintained by NIC Haryana State Unit. The goal of DBT based on accounts was achieved in December 2015 for entire state and maintained continuously since then as shown in the Figure-3.

## Approach Methodology

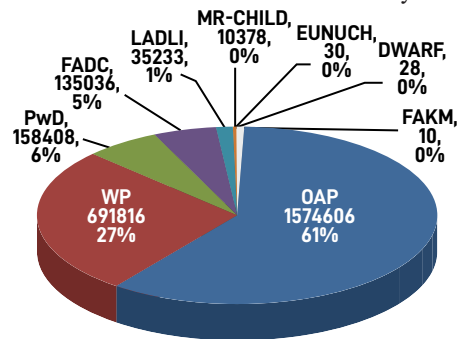
- Migration of legacy district level databases of beneficiaries to the centralized database and made it accessible to each district through a dynamic website using respective user-ID and password
- Each beneficiary assigned a state level unique pensioner ID besides Aadhaar
- All 56 scheduled Banks, Post offices and m-Paisa (private mobile service provider) in Haryana were engaged and interfaced with the website for opening and uploading of accounts of existing beneficiaries to start accounts based DBT
- Fresh eligible persons for SSP, approach to nearby CSC/ ASK / SARAL Antyodaya centre with required documents to apply online to become beneficiary
- Respective District social welfare officers (DSWO) verify documents of the beneficiary and approve the same online on the centralized server
- Banking agencies credit beneficiaries accounts by downloading the system generated digitally signed FTOs (list of beneficiaries) and accordingly the funds transferred through treasuries by the Department
- Banking agencies upload Server response files (part of MIS) showing success or failure of credit to the beneficiary accounts, response whether success or failure is integrated with the pension database
- Establishment of Customer service providers (CSPs) at village/ block/ MC levels and manned by bank/ BCAs for enrolment, disbursement of pension as well as addressing of grievances

## FEATURES

- Online interfaces given to 56 banks, post

offices and (private mobile service provider) for data updates

- Server logs are maintained to track audit trail of the changes made in the beneficiary data. DSWOs, Banks, Post offices are responsible & accountable for data updation.
- Multiple channels (CSC/ASK, SARAL Kendra, Antyodaya centres and Online by an individual) to facilitate persons to apply for pension
- Bilingual Interface, GIGW & WCAG 2.0 compliance with required features for disable persons
- Banks verify the accounts and its holder's details prior to start remittance
- Banks update back on the pensioner's website, the details of 'in-active' accounts (where no withdrawal for last 90 days), 'dead accounts' and server response for processing of pension in the subsequent month
- Integration with RGI portal to flag deceased beneficiaries based on Aadhaar number
- MIS analytical reports have been made available as intra part of the beneficiary portal
- Beneficiaries can also lodge complaint and submit feedback through public portal
- SMS alert is sent to beneficiary on



- Old Age Pension @ Rs. 1800/-
- Widow Pension @ Rs. 1800/-
- Disability Pension @ Rs. 1800/-
- Financial Assistance to Destitute Children @ Rs. 900/-
- Ladli Social Security Pension @ Rs. 1800/-
- Non-School Going Disabled Children <18 @ Rs. 1200/-
- Allowance to EUNUCH @ Rs. 1800/-
- Allowance to DWARF @ Rs. 1800/-
- Financial Assistance to Kashmiri Migrant @ Rs. 1000/-

Fig:1 Scheme wise division of Beneficiaries



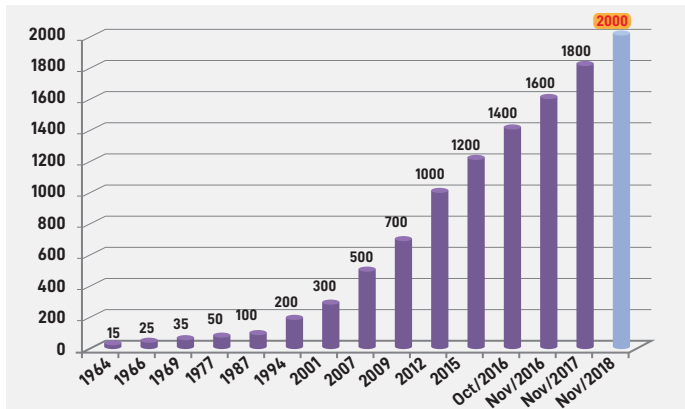


Fig: 2 Rate of pension (year)

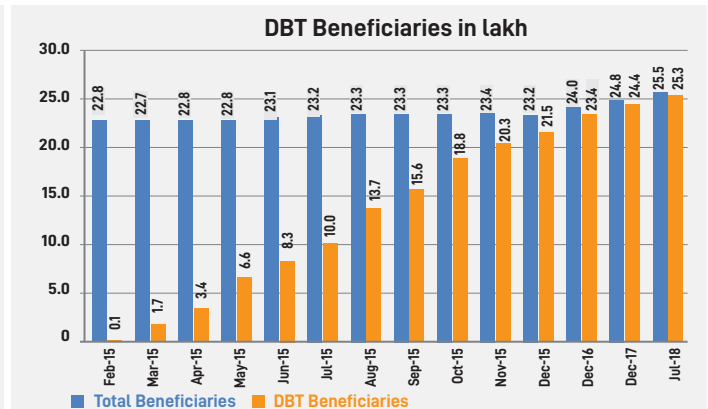


Fig: 3 Graph showing Gradual shift from cash to accounts based DBT

successful enrolment with unique pension ID

- Mobile App has been developed and hosted to view the status of beneficiary and benefits received as shown in Figure-4.

## CAPACITY BUILDING & MONITORING

- Review meetings held with banks/ post offices, and necessary workshops and training camps organized
- Organizing of camps for awareness and inspiring the beneficiaries for accounts based DBT including Aadhaar enrolment and opening of accounts
- Progress review at the level of Hon'ble CM, Minister and Senior Officer
- District level officers are trained in software operations by NIC for updation of beneficiary data online
- Related department officials were also trained on handling of the website
- Creation of PMU (IT-Cell) for handling of the project
- Team "Kalyan Karini" was constituted for successful implementation of this project including District Level functionaries, State level functionaries, NIC, Banks, Post offices, Mobile Service Provider etc.



Fig: 4 Mobile App for beneficiaries to know pension status

## SERVICE DELIVERY CHANNELS

- **CSC/ ASK service centres**- Submission of application and taking receipt and SMS alert
- **Antyodaya centres/ Saral centres**- Submission of applications and Information centres
- **Banks branches and identified post offices**- Opening and uploading of accounts
- **District level officers**- Grievance handling and approval of documents and beneficiary
- **Banks BCAs for doorstep delivery**- Disbursal of pension benefits using AEPS at doorstep

## IMPACT

- More than 1.13 lakh beneficiaries weeded out by March 2017, who did not turn up for opening and uploading of accounts
- Aadhaar based de-duplication further filtered down more than 66 thousand beneficiaries due to different reasons
- Accounts based disbursal of benefits made the PRIs and ULB staff free for other productive works
- Large quantities of paper (2.5 lakh sheets per month), printer, ribbon and similar resources, and energy consumed accordingly have been saved
- Doorstep services delivery to beneficiaries, minimized travel burden on old aged and challenged persons
- No parking of funds

## External Recognitions

- CSI-Nihilent Appreciation Award 2017 in Coimbatore
- SKOCH Award of Merit 2017 in New

Delhi

- SKOCH Gold Award 2016 in Hyderabad
- Financial Inclusion Award in 2012

## TECHNOLOGY USED

- Web application is developed using ASP.NET as front end and SQL Server 14 as back end. It is 3rd party security audited and secured with SSL/ TLS implementation.
- SFTP server based data exchange to and from SBI server
- DSC, for signing of FTOs using SHA-2, 2048 bits algorithm
- Android based mobile app has been developed using PhoneGap
- POS machines are used for door step disbursal and interfaced with the website

## ROADMAP

- Verification of beneficiaries through eKYC at CSC level
- Benefit transfer through NPCI for 3.45 lakh beneficiaries through IPPB (India Post payments bank)
- Benefit transfer through PFMS for NSAP (CSS) schemes
- Automate the process of transfer of NSAP data (new beneficiaries, monthly transactions) to NSAP website of the Government of India

For further information, please contact:

**STATE INFORMATICS OFFICER**  
NIC Haryana State Office  
G-03, New Secretariat Building, Sector-17  
Haryana, CHANDIGARH - 160017

Email: sio@hry.nic.in  
Phone: 172-2741950

# GOA Goods & Services Tax (GST) System

## From Desktop to Mobile device, Integrating e-Sign feature

Goa GST System, an intranet Application for Goods and Services Tax for Department of Commercial Taxes, Govt. of Goa was made operational on 1st July 2017 is a completely paperless system designed as a "Step Towards Migration from Desktop to Tab" by integrating the e-Sign feature for approvals. It is tightly coupled with GSTN and made operational successfully. Efforts are being made for roll out in other States.

**K P PARISELVAN**  
Sr. Tech. Director & ASIO  
kpp.pari@nic.in



**S SENTHIL NAYAGAM**  
Scientist- C  
senthil.nayagam@nic.in

Edited by  
**A. K. DADHICHI**



Government of India has introduced the Goods and Services Tax (GST) system on 1st July 2017. The Government has also established Goods & Services Tax Network (GSTN) for providing IT support for GST to Centre as well as States. As per the options provided by the GSTN, the State of Goa has opted for Model 1, in which State GST Back Office Application is to be developed and implemented by the respective State Commercial Tax Department, in coordination with GSTN.

The Goa Commercial Tax Department entrusted the State GST Application development and implementation to NIC, Goa through NICSI.

### GOODS & SERVICES TAX (GST)

GST is a broad-based, comprehensive, single indirect tax which will be levied concurrently on goods and services across India. It has replaced most of the Central and State indirect taxes such as Value added Tax (VAT), Excise Duty, Service Tax, Central Sales Tax, Additional Customs Duty and Special Additional Duty of Customs.

### Goa GST System (GGST)

GGST is designed based on three-tier Model View Controller (MVC) Architecture. The System is conceptualised accordance with GST Act / Rules. Developed in coordination with central GSTN, GGST is a workflow based system to achieve paperless office.

The modules developed and implemented in the system are:

### Registration

- Fresh Registration of Tax Payers
- Migration from VAT to GST
- Amendment of existing Registration
- Surrender of Registration
- Suo Moto Cancellation of Registration
- Opting in/ Opting out for Composition of Tax
- Tax Practitioner Registration
- Tax Deductor and Tax Collector Registration
- Tax Payer Search

### Returns

- GSTR3B, GSTR1, GSTR2, GSTR3 and GSTR4 Returns
- GSTR2A – Invoice matching of Seller and Purchaser
- Matching of Return details between GSTR3B and GSTR1
- Return Non-filers Notice to Tax Payer through e-Mail
- Transition processing for credit of Input Tax Credit for Tax Payers migrated from VAT to GST

### Tax Collection

- Challan-wise Tax Collection
- Tax Collection Reports for monitoring
- RBI to State Treasury - Tax Collection Report for Reconciliation
- Settlement Ledger with remittance of Taxes to State

### Ward Offices and Tax Payer Units

- There are 8 Ward Offices
- Ward Offices are further divided in Tax Payer Units allotted to each State Tax Officer
- Unit based pendency and tax collection reports for monitoring of units perfor-





Inauguration of GoaGST website by Hon'ble Chief Minister of Goa, Shri Manohar Parrikar

mance by higher officials

### Integration of Digital Signature Certificate (DSC)

- Approvals are performed by the officers using DSC

### Ledgers

- **Cash Ledger** – Details of Tax Payments made by the Tax Payer
- **Input Tax Credit (ITC) Ledger** - Tax Payers ITC Credit and Utilization details
- **Tax Liability Ledger** – Tax Liability of Tax Payers based on Returns and Invoice details

### Assessment of Tax Payers based on Returns and Tax Payments

### Refund Processing

*Apart from the above modules, development and implementation of new modules are carried out as required by the department from time-to-time.*

## ARCHITECTURE

GST System is integration of Central,

State and CBEC Systems. Data exchange between these systems happens using Application Program Interface (API).

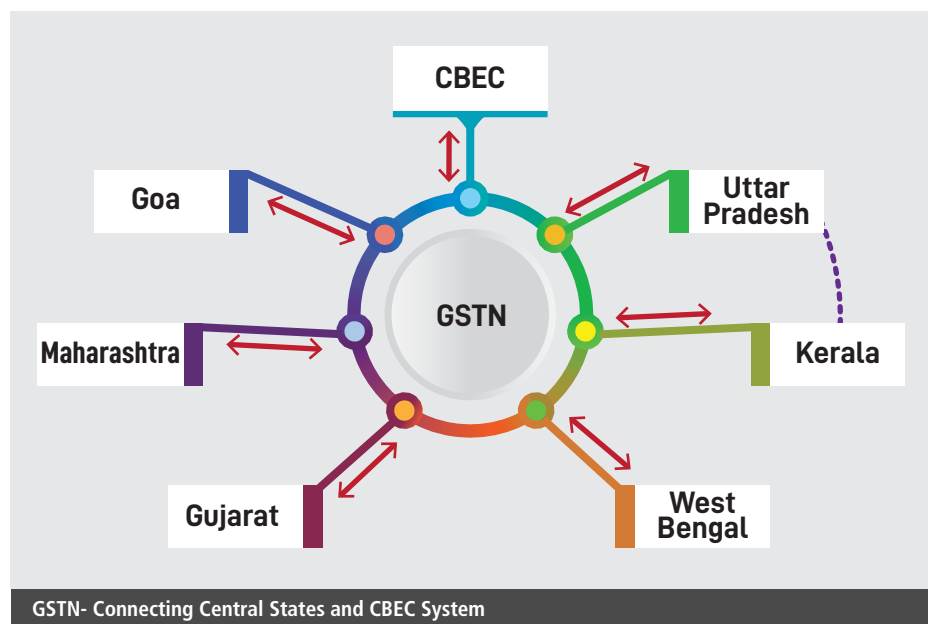
The main hub of GSTN from Delhi is terminated at NIC, Goa State Centre. GGST Application and Database Servers are installed centrally at NIC Goa Data Centre. The GGST Application is being accessed through State SWAN network

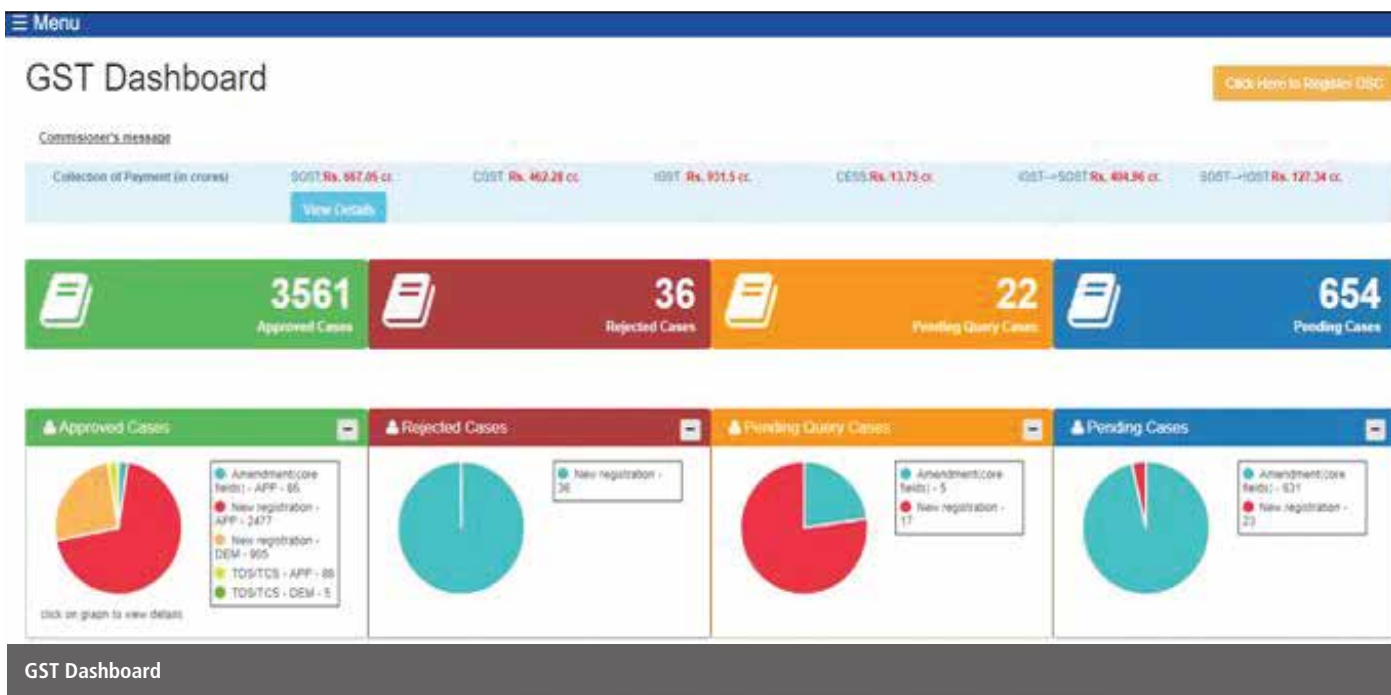
called Goa Broad Band Network (GBBN) which is providing 1 Gbps connectivity to the taxation offices located across Goa.

## DASHBOARD

Dashboard reports for the following are available in the GoaGST system:

- Registration





- Tax Collection
- Returns
- Units

### GOA GST MOBILE APP

Goa GST Mobile App is developed and hosted in Google Play Store, for the use of department officials. The App contains features such as Registration, Returns, Tax Collection, Migration, e-Sign etc.

- Approvals in Mobile App are

performed using e-Sign

- Designed for Enforcement visits for the Officials
- It is replication of Goa GST System on the Mobile or Tab

By Integrating e-Sign with Android, the dealer submitted applications are being processed and approved by the competent authority using tab/ mobile from anywhere without the need of desktop computers. This will eliminate overhead

costs of purchase, operation and maintenance of desktops and also remove access limited to table and working hours.

### WEBSITE FOR GGST

NIC Goa has developed and hosted a website for Goa Goods and Services Tax (GGST) and it was inaugurated by the Hon'ble Chief Minister of Goa on 28th June 2017 prior to the launch of GST, which was held on 1st July 2017.

### WAY FORWARD

Goa GST System was made operational on 1st July 2017 and is 100 % paper less system. It is designed as a "step towards migration from desktop to tab" by integrating e-sign feature in Android platform for approvals. It is tightly coupled with GSTN and is successfully operational. All efforts are being made for the product roll-out in other states.



For further information, please contact:

**STATE INFORMATICS OFFICER**  
 Goa State Centre, Paraiso De Goa  
 H - Block, Porvorim  
 GOA- 403521

Email: sio-go@nic.in  
 Phone: 0832-2410160



# Integrated Fertilizer Management System (urvarak.nic.in): Ensuring Adequate & On-time delivery of Fertilizers to the deserving

About 28.02 million tonnes of fertilizers were sold during April-September of this fiscal year through the PoS devices installed at retail shops under the Direct Benefit Transfer (DBT) scheme. Paperless processing of weekly subsidy claims and payment to companies through PFMS is fully operational now.

**DR. RANJNA NAGPAL**

Deputy Director General  
ranjna@nic.in



**RAJIV SHARMA**

Senior Technical Director  
rajivsharma@nic.in

Edited by  
**MOHAN DAS VISWAM**

**F**ertilizer subsidies in India currently account for the second-largest Government transfer, with a yearly estimated outlay of over Rs. 70,000 Crore.

Several reforms have been introduced by the government from time to time to improve the distribution of fertilizers across the country for ensuring adequate and timely availability of fertilizers to the farmers.

For effective monitoring of movement of fertilizers upto retailer level, Mobile based Fertilizer Management System (mFMS) was introduced in November 2012 for obtaining receipt of sale transactions from more than 2.20 lakhs retailers through mobile application. Integrated Fertilizer Management System (iFMS) was launched in June 2016 which is a comprehensive, all-inclusive system covering all functionalities in the fertilizer supply chain. The Department of Fertilizers introduced "Direct Benefit Transfer (DBT) in Fertilizers" scheme for better monitoring of fertilizer sale transactions across the country by capturing the fertilizer sales from retailers to farmers through Aadhaar enabled PoS devices and online subsidy payment to companies on weekly basis and the software solution was enhanced accordingly.

After successful implementation in 16 pilot districts from October 2016 to August 2017, the State-wise roll-out was undertaken from September 2017 onwards and all the States have been on-boarded successfully in March 2018

The major iFMS modules are:

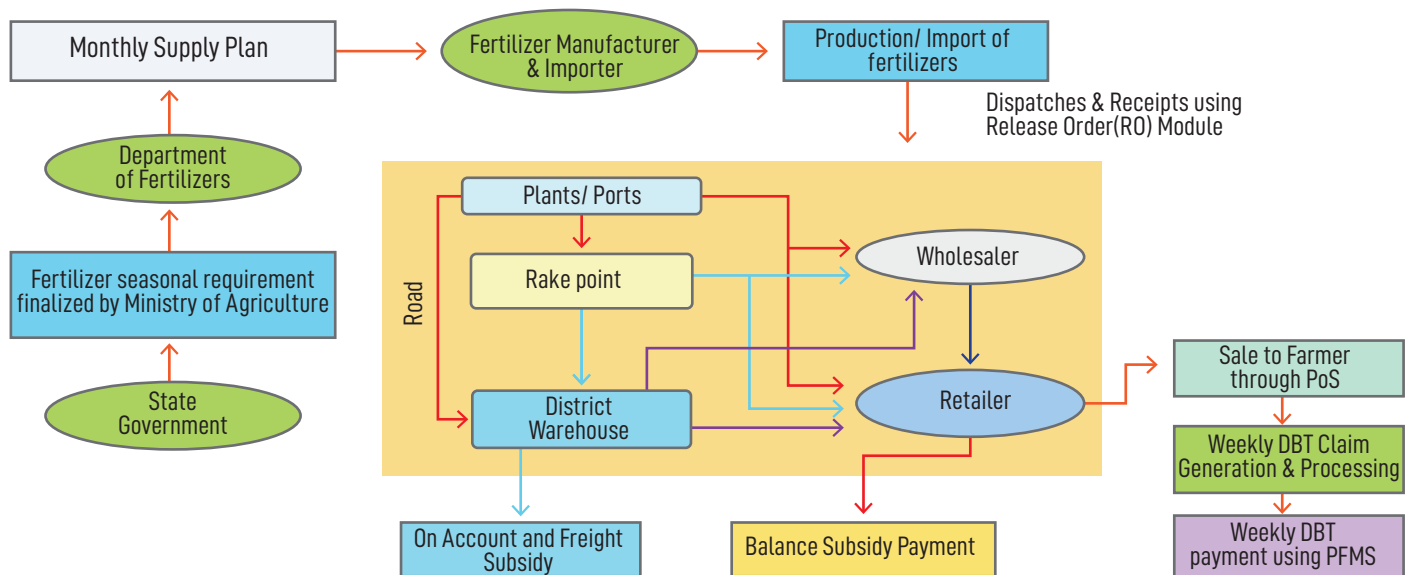
- Production and Raw Material Management
- Requirement & Supply Plan – State and District Level



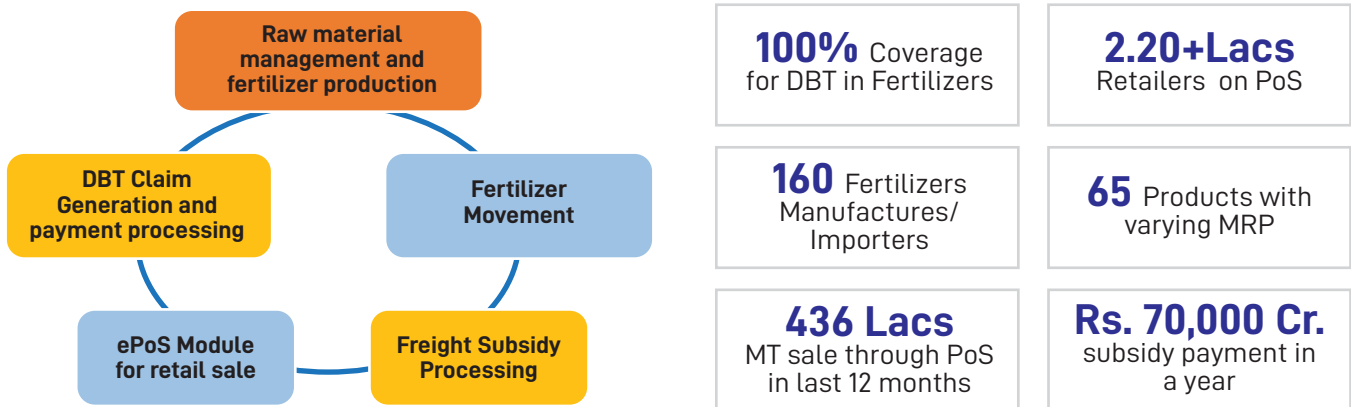
**“**  
Under the fertilizer DBT system, 100% subsidy on various fertilizer grades is released to the fertilizer companies on the basis of actual sales made by the retailers to the beneficiaries who are identified through documents like Aadhaar card, Kisan Credit Card and Voter Identity Card.  
**”**

**BHARATHI SIVASWAMI SIHAG, IAS**  
Secretary  
Department of Fertilizers, GoI

- Dispatches from Plant/ Port/ Rake-point to District warehouse/ rake-point/ wholesaler/ retailer and their Receipts
- Sale from company to wholesaler/ retailer and its acknowledgment
- Sale from wholesaler to wholesaler/ retailer and its acknowledgment
- Mobile-based solution for acknowledgement of sale by wholesaler/ retailer
- On Account and Balance Subsidy Payment to fertilizer companies
- Freight subsidy payment to fertilizer companies

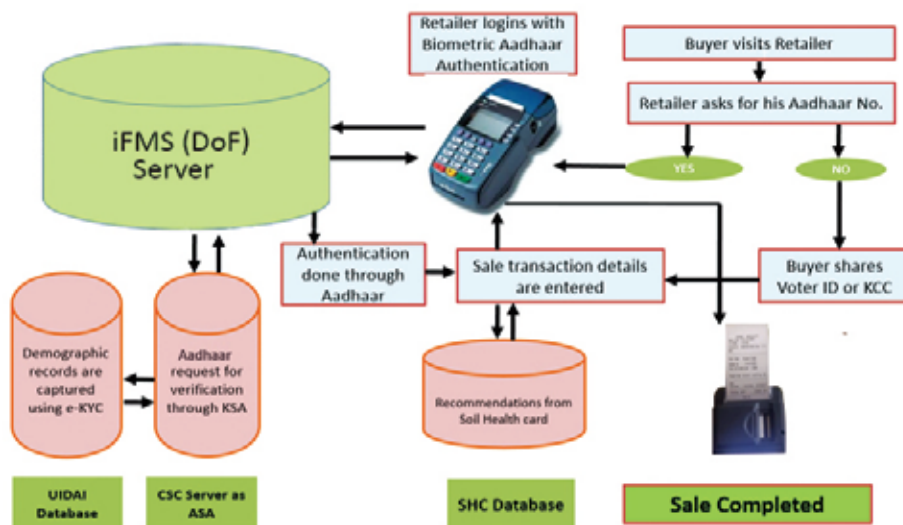


Fertilizer Supply Chain



Main Modules of iFMS

Implementation Status



Fertilizer Sale to Farmers through PoS Device

- Stock Management at Plant, Port, Rake Point, District Warehouse, Wholesaler and Retailer
- Sale of fertilizers from retailer to farmer through Aadhaar based POS devices
- Paperless processing of weekly subsidy claims for payment to Fertilizer Manufacturers/ Importers through PFMS

## BENEFITS OF iFMS

- Real time status on fertilizer stock availability across the country at all stock points
- Effective monitoring of fertilizer movement in fertilizer supply chain to ensure receipt of subsidised fertilizers to the intended beneficiary





- Effective monitoring of fertilizer availability in accordance with the state-wise monthly fertilizer requirement
- Faster processing and payment of subsidy to manufacturer/ importer
- Authentic Fertilizer Dealer database
- Farmer authentication on the basis of Aadhaar/ EPIC/ KCC
- Performance Report with Dashboards

## FERTILIZER DASHBOARD

### (urvarak.nic.in)

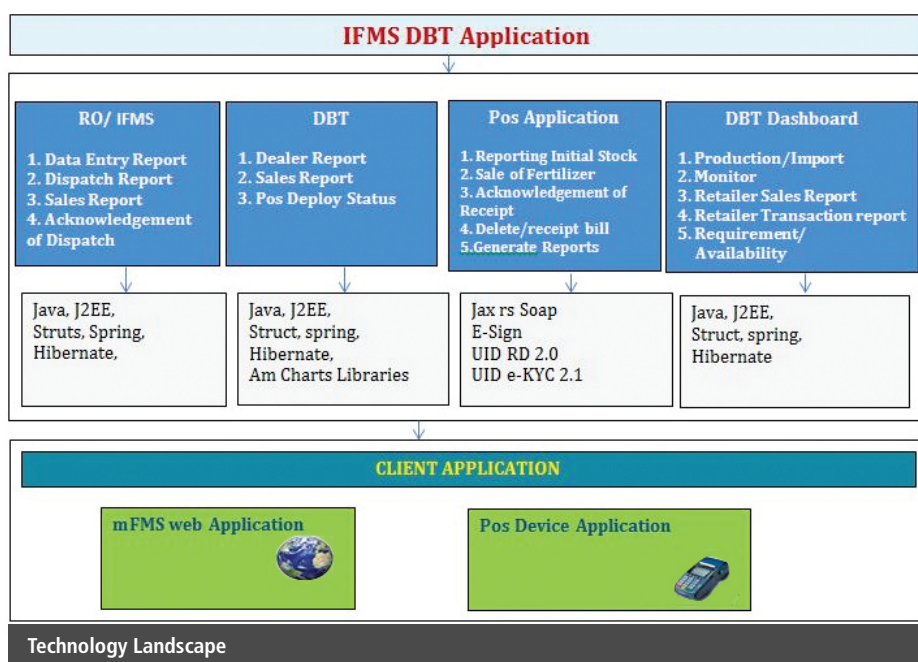
The Dashboard presents an analytical view of information on all aspects of fertilizer supply chain including sale of fertilizers from retailers to the farmers. The management dashboard depicts the state-wise scenario of availability of fertilizers to help DoF meet the fertilizer requirement of states in an adequately and timely manner. The collective information can also be used as Decision Support System for demand projections of fertilizers on pan India basis.

## IMPLEMENTATION SUPPORT

- 86 Virtual machines/ Servers deployed by NIC to handle DBT system
- 15 Seat multilingual call centre cum help-desk setup (Toll Free No: 1800115501)
- Help-desk of 5 (NIC) technical experts
- Technical support on DBT WhatsApp group
- DBT PMU operational at DOF
- Engagement of 24 State DBT Co-ordinators
- Trainings conducted across India
- Bilingual online training videos available on Youtube

## HOW TO ACCESS

Training manuals and videos are available at URL <http://mfms.nic.in> and for actual data entry, users can visit the <https://dbtfert.nic.in/mFMS>.



For further information, please contact:

**DR. RANJNA NAGPAL**  
Deputy Director General  
National Informatics Centre  
A - Block, CGO Complex, Lodhi Road  
New Delhi - 110003  
Email: [ranjna@nic.in](mailto:ranjna@nic.in)  
Phone: 011-24392167

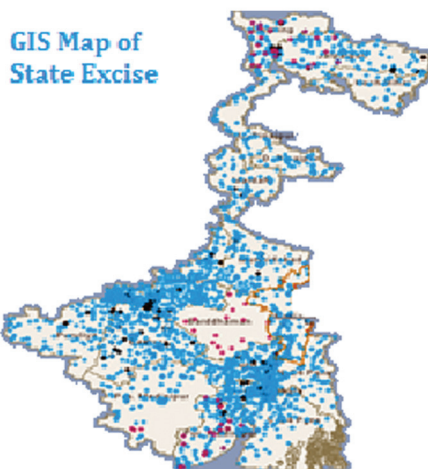
# e-ABGARI - Complete IT Driven Supply Chain Management System for State Excise

The project is built on the methodology of “Reduced discretion - Electronic workflow - Electronic service delivery,” adopting a web-enabled delivery mechanism to ensure the delivery of G2B, G2C, G2G services in a timely, transparent, more accessible and reliable manner.

Edited by  
**DR. DIBAKAR RAY**

**S**tate Excise is the 2nd highest revenue earning resource component in most of the States in India. It provides around 20 per cent of the share of the government’s own revenue in most States. The statutory objectives of State Excises in India are effectively controlling the production, manufacturing, possession, transport, purchase and sale of intoxicating liquor, and thereby optimising the collection of government duties & fees on excisable commodities and safeguarding public health, at the same time. Due to the changing fiscal environment in Post-GST scenario and the utmost need for compliance with the FRBM Act to ensure sustaining long-run fiscal health through transparency in fiscal operations, the State Governments have started to explore the possibilities of augmenting their revenues by mobilizing State Own Revenue Resources through adoption of ICT driven schemes.

Improving tax compliance by businesses and professionals, adoption of good administrative procedures, and building robust system to combat sources of Tax



State Excise GIS Map

base erosion/ arresting revenue leakage points can strengthen Revenue Resource Mobilization (Ref. World Bank Report on Domestic Resource Mobilization (DRM), March 29, 2016). In most of the States in India, ICT enablement in State Excise is in basic stage. Presently, the States, with utmost importance, have started to explore suitable e-Governance solutions for adoption in State Excise (i) to arrest revenue leakage points and (ii) to control excise crimes for better revenue realization from State Own Revenue Sources.

## PROJECT e-ABGARI

The e-Abgari project (<https://excise.wb.gov.in>) is a strategic administrative reform initiative of West Bengal State Excise leveraging state-of-the-art modern technology to provide a workflow based end-to-end solution covering all activities of the directorate. Prior to 2012-13, operations of West Bengal State Excise were purely manual, based on antiquated procedures which had not been changed for decades. Apart from this, the hooch tragedy at Sangrampur in South 24 Parganas, West Bengal in late 2011 which claimed over 170 lives acted as an immediate trigger for the Government to start thinking of replacing and re-engineering the activities of the State Excise in order to give more teeth to the Excise administration. NIC was entrusted to work as ICT consultant in this regard.

The reengineering initiative involved implementation of Information Technology solutions for state excise operations. The outcome of the reengineering initiative was e-Abgari project, designed, developed by NIC in close association with Excise Directorate, and it has tremendous transformative effect on the functioning of West Bengal State Excise. The project is built on the methodology of “Reduced discretion - Electronic workflow - Electronic service delivery” adopting a web-enabled delivery mechanism to ensure the delivery of G2B, G2C, G2G services in a



**R H KHAN**  
Dy. Director General  
[rh.khan@nic.in](mailto:rh.khan@nic.in)



timely, transparent, more accessible and reliable manner.

## 45+ONLINE e-SERVICES

e-Abgari is an umbrella solution for a number of electronic services. At present more than 45 services are covered under e-Abgari. Some of which are -

- Grant of New Excise License & Renewal of Excise License
- Change in Excise Establishment Management
- Registration of Brand & Labels of Packaged Liquor
- Collection of Excise Duties/ Fees.
- Hand Held Terminal/ Bar-code Scanner driven Supply Chain Management of Packaged Liquor
- Import of Molasses, Bulk Spirit, SDS, Methanol, Medicinal spirits, Packaged Foreign Liquor from other States
- Export of Molasses, Bulk Spirit, Packaged Foreign Liquor, Packaged Country Spirit to other States
- Transport of Bulk Spirit, Packaged Foreign Liquor & Country Spirit within the State
- Transport Packaged Foreign Liquor from Custom Bonded Warehouse
- Transport of Packaged Country Spirit within the State
- Permission for Late Serving in Retail Outlets
- Grant of Temporary Bar License
- Computerization of Chemical Examination Laboratory
- Daily Preventive Raid Reporting system
- Daily Sales Reporting & detailed Inventory of Retail outlets
- Monthly Revenue Return from Excise Licensees
- Monthly Revenue & Intoxicant Consumption Report from O/c, Excise Districts
- Integrated service with Police Authority for NOC for grant of License/ Late Closing
- Supply Chain Management of QR Coded Holograms from Press till its affixing on Packaged Liquor through

Applicators

- Country Spirit Salesman Registration Module
- Court Case Monitoring System, Excise Misc. Case Monitoring System & Excise Criminal Information System
- Public Grievance Monitoring System
- **eBevco** is an ERP solution under e-Abgari, which has been developed for West Bengal State Beverage Corporation Limited (WBSBCL) to provide end-to-end solution comprising of Registration of business associates, Automated Supply Order to Suppliers, regulating and monitoring movement of packaged spirits upon receipt at warehouse and upto shipment to Retail Outlets, Release of payment to supplier on receipt of sale information from retailer based on indentation, Invoice management, Tracking, reconciliation of bottles/ cases with alerts & exception reporting, Reporting and analytics of key operational & financial parameters, Management of supplies and inventories of packaged liquors, Integration with banking payment gateways etc.

## INNOVATIVE APPROACHES

A number of innovations are incorporated into e-Abgari to meet changing requirements of the domain. A few of such innovations are mentioned here -

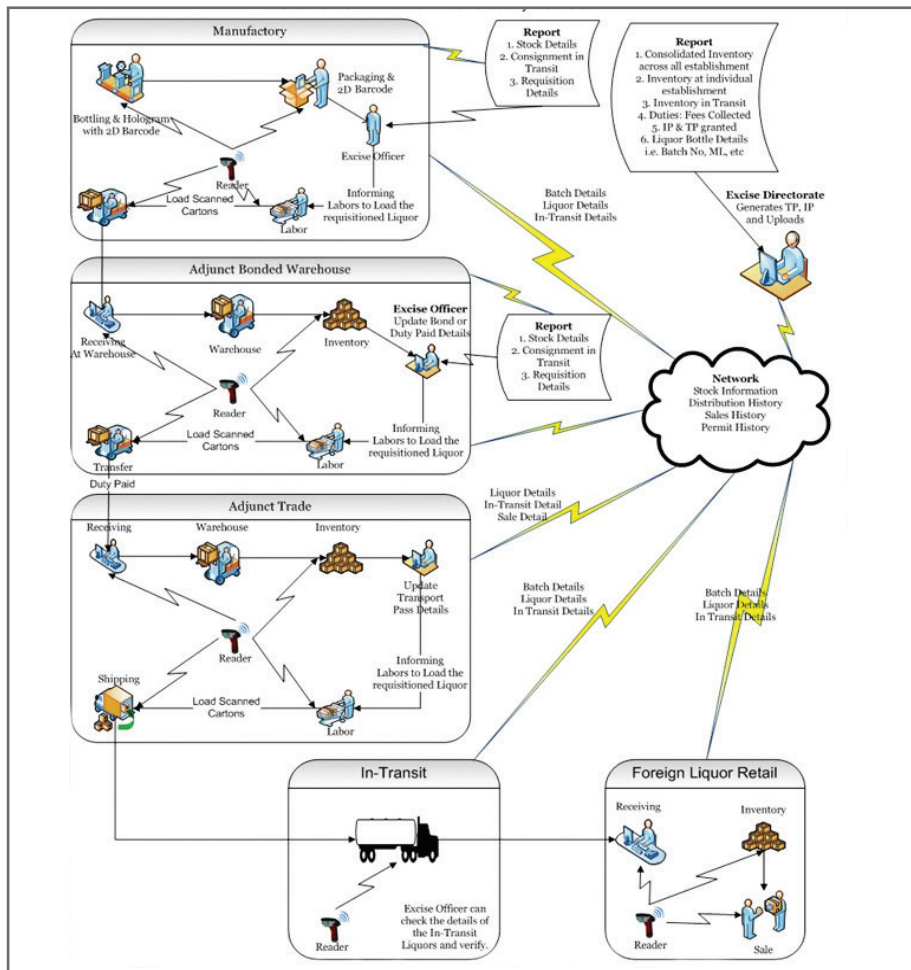
- Online communication among all excise officials across the state, all licensees, administrative departments & other stakeholders through work-flow based systems hosted in state excise portal <https://excise.wb.gov.in>
- Collection of data from the lowest level in state excise supply chain to build centralized data-bank containing relevant information of regulatory activities, licensees, registered liquor brands, production and movement of excisable goods and transaction of revenues
- Track & Trace – Automated Supply Chain Management of Packaged Liquor using QR Code based Labels on Cases/ Cartons and Hand Held Terminal (HHT)
- QR Code based Hologram labels on Liquor Bottles to ensure authenticity of Packaged Liquor through web services
- Monitoring and maintaining records of inventories of liquor, and spirits used for the manufacturing of liquor, at all the

liquor-manufacturing, wholesale and retail locations in the state in real-time basis and thereby ensuring reconciliation of every drop of spirit imported or manufactured

- Online dynamic dashboards enabling tracking process pendency at all hierarchical levels, easy monitoring & tighter administrative control through better inventory management, decision making, policy changes, and timely and intelligent report generation
- Auto SMS, Email alerts/ notifications to stakeholders
- Extracting process status information or validating authenticity of permits/ passes/ packaged liquor through SMS Pull service
- Checking authenticity of Bar-coded Permits/ Passes of in transit consignments through e-Abgari Mobile Apps by excise officers using smart phone devices
- Use of GI tools like GPS mapping of Excise Licensed Premises across the State
- Data Collection, Aggregation & Monitoring of enforcement activities against the manufacture, distribution, sale and possession of narcotics – Breach Case, Criminal Case and Illegal Activities, thereby arresting revenue leakage points
- Application software driven Business Analytics: Supply Chain Planning forecasting within inventory, demand & supply, and thereby balancing demand & supply based upon intelligent algorithms



QR Code Scanning & HHT for Track & Trace



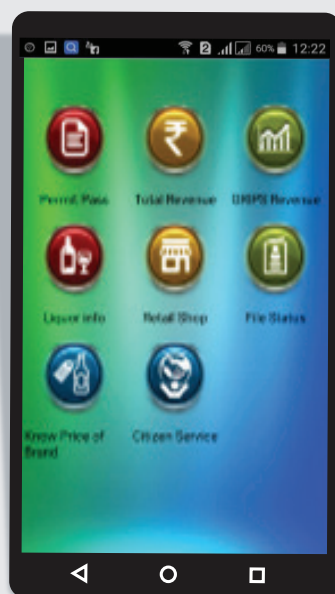
Movement of IMFL from Manufacture to Retail

- Warehouse Management through overcoming supply flaws (overstocking or under stocking)
- Creating Supply Chain visibility and gaining supply risk insights through usage of cognitive technology to track and predict supply chain disruptions based on gathering and correlating external data from disparate sources such as news-feeds, weather forecasts and historical data
- Mobile App to facilitate Asynchronous Data Capture in text format with the facility to store it temporarily in Mobile Device Storage and upload the data when Mobile Network is available for providing seamless e-Services to Excise Retail Licensees of Rural Areas suffering from lower bandwidth, intermittent internet connectivity and interrupted power supply
- Extracting process status information or authentication of permits/ passes or SKUs of packaged liquor on the field through Bar Codes and QR Codes or through free Pull SMS or Mobile App
- Reporting of excise related crimes by Citizens (along with Photographs) using e-Abgari Mobile Apps
- Incorporation of standard web technologies and techniques such as HTTP redirects, cookies, JavaScript SOA, XML SOAP etc. strong symmetric key encryption (MD5 Hashing) to deliver the single sign-in service over https for ensuring secured transactions
- Seamlessly integrating a wide array of modern ICT technologies- the web, bar-codes and QR codes, PUSH/ PULL SMS, Artificial Intelligence (AI) driven Supply Change Management, GIS, Mobile Apps, Hand Held Terminal (HHT), the e-Abgari project has significantly reduced service-delivery times and has greatly enhanced the government's regulatory capabilities

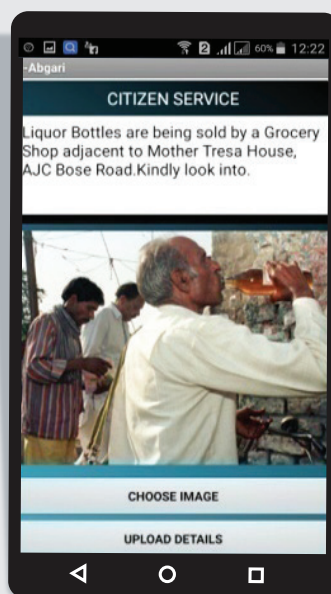
## BENEFITS ACCRUED – FACTS & FIGURES

e-Abgari has proved to be extremely beneficial for the state in terms of revenue and efficiency gains. A few key benefits delivered by the system are -

- Facilitates to handle the process transaction in an efficient manner. For example: (a) Issuance of Permits/ Passes : Pre-eAbgari (15-30 days) and



e-Abgari Mobile App





Post-deployment (Same Day). (b) Label Registration of Packaged Liquor: Pre-eAbgari (20-45 days) and Post-deployment (Same Day). (c) Permission for importing life-saving drugs: Pre-eAbgari (20-30 days) and Post-deployment (Same Day). (d) Payment of duties and fees: Pre-eAbgari (Time consuming, cumbersome and during office hours on working days) and Post-deployment (Instant and 24 x 7). (e) Status of Service Requests by stakeholders: Pre-eAbgari (Lack of transparency) and Post-deployment (Instant- both online and through SMS). (f) ePayment of duties and fees: Pre-eAbgari (0 %) and Post-deployment (100 %)

- Ensuring supply of life saving drugs to CCUs, Issuance of Permits/ Passes for bulk spirit/packaged liquor, Label Registration of Packaged Liquor, Supply of Industrial Alcohol & Alcohol for Research etc. within 90% reduced time
- GPS mapping of all excise establishments, enabling effective policy interventions
- Processing of around 253,00,00,000 QR coded security holograms to identify counterfeit liquor bottles
- Around 19,00,000 system generated Alert SMS
- Generation of around 45,00,000 Permits/ Passes/ NOCs/ EVCs
- Reporting of around 40,000 Enforcement Raids
- Initiation of 3,50,000 Criminal cases,

Serving Summons, Generation of Judgment Notes, Collection of Penalty- all in work-flow based manner- using e-Abgari

- Minimum Consumption Maximum Revenue ensured- while consumption of intoxicants in the State has risen by only about 5-6 percent annually since 2014-15, the collection of Excise revenue has gone up from Rs. 3581 Crores during 2014-15 to around Rs. 9,600 Crores during 2017-18 registering a CAGR of over 38 percent. During last 1 year, WBSBCL has already seen a business of over 10,000.00 Crores with a wholesale margin of over 200.00 Crores

- Through successful implementation of e-Abgari since last 3 years, West Bengal has earned the distinction of becoming the lead state in the country to implement all activities of State Excise under an umbrella e-Governance project.

- It has proved to be a Classic example of cost-effective solution in comprehensive transformation of government processes facilitated ease of doing business (EoDB). It has made easier for liquor retailers, wholesalers and manufacturers to transact business with the government, while, at the same time, provide the state excise authorities an effective and efficient mechanism to regulate the manufacture and sale of liquor in the state and carry out the enforcement activities.

## AWARDS

Success of e-Abgari has been acknowledged and appreciated across

India. Several accolades and awards are bestowed upon the project. Some of the Awards bagged by the e-Abgari :

- National e-Governance Award 2018,
- Technology Sabha (Indian Express Group) Award 2018,
- CSI-Nihilent e-Governance Award 2016
- Skoch e-Governance Award (Platinum) 2015
- e-Abgari project has been selected for inclusion in e-Gov App Store to make it available as a National Product.

## CONCLUSION

With e-Abgari, it has been possible to reconcile every drop of spirit imported or manufactured in the state and tracking duty evasion by generating a 360 degree profile of the Excise Licensees, Permits & Passes issued for movement of excisable goods. Through successful implementation of e-Abgari for last 3 years, West Bengal has earned the distinction of becoming the lead state in the country to implement all activities of State Excise under an umbrella e-Governance project. It has proved to be a classic example of cost-effective solution in comprehensive transformation of government processes, and thereby facilitating the ease of doing business in the state.

Inspired by the success story of West Bengal State Excise, many States in recent time have shown interest in the replication of e-Abgari. This includes Maharashtra, Punjab, Tripura, Sikkim, Uttar Pradesh, Haryana, Assam etc. The project e-Abgari is developed abiding Bengal Excise (BE) Act 1909, the oldest Excise Act of India and all other State Excise Acts are framed based on BE Act 1909 with few state specific modifications. Hence e-Abgari project can be replicated at other States in shortest possible of time as customization requirement is minimum.



Hon'ble Union Cabinet Minister, Shri Narendra Singh Tomar conferring award for e-Abgari project to Shri Mainak Mukhopadhyay, Technical Director, NIC, West Bengal

For further information, please contact:

### STATE INFORMATICS OFFICER

West Bengal State Centre  
Bidyut Bhavan, Gr. Floor, Saltlake, DJ Block  
Sector-II, Kolkata  
WEST BENGAL - 700091

Email: [sio-wb@nic.in](mailto:sio-wb@nic.in)  
Phone: 033-23501929

# Chatbot Framework for e-Gov

## Meet VANI – Virtual Assistant of NIC

VANI is a virtual assistant that mimics a human & tries to help users - especially those not well versed with the web or technology in general. It is built using the principles of the latest disruptive technology of our times, that is Machine Language & Artificial Intelligence



**VARINDRA SETH**  
Sr. Technical Director  
seth@nic.in



**JOHN PHILIP**  
Technical Director  
johnphilip@nic.in



**NIDHI LOHAT**  
Scientific Officer-SB  
nidhi.lohat@nic.in

Edited by  
**MOHAN DAS VISWAM**



Chatbot is a piece of software that aims to interact, and respond with a user like any human would. Unlike a traditional software application whose behaviour is tightly bound by its design and code, a chatbot relies more on underlying machine learning algorithms that help it to recognize and identify patterns, make classifications into different classes of data or make decisions based on threshold set for a continuous type of data. It's an accessible form of Artificial Intelligence (AI) that is increasingly being put to use in businesses everywhere. Right from travel enquiries to bank loans, we see chatbots being the primary point of contact for most common enquiries and issues across all the fields of work today.

### TECHNOLOGY BRIEF

Chatbots are the prime and most easily implementable example of AI, encompassing deep learning, natural language processing, and machine learning algorithms. Like any AI driven application, Chatbots also need massive amounts of data to produce fruitful results. The more an end user interacts with the bot, the better recognition becomes at predicting what the appropriate response is when communicating with an end user. This process is called training the engine.

Chatbots can be stateless or stateful. A stateless chatbot approaches each interaction as if it was with a new user. A stateful chatbot is more sophisticated; it can review past interactions and frame new responses in same context. Consider the following chat (figure 1).

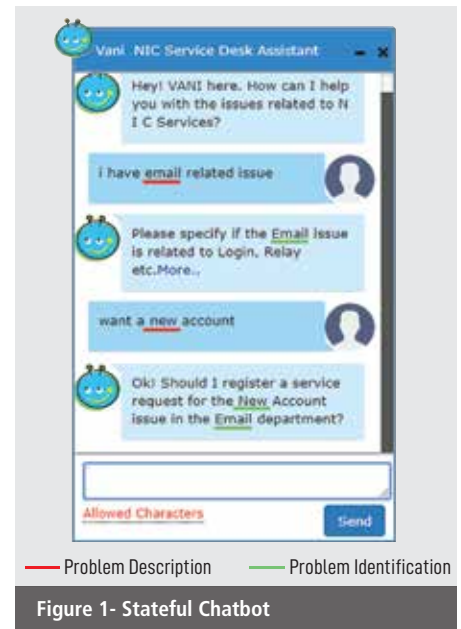


Figure 1- Stateful Chatbot

This chat snippet is an example of a 'stateful' bot. The user has mentioned only once in the beginning that his/her overall issue is email related. From the next response onwards, the bot implicitly understands that further responses will be related to email. This is called maintaining a particular context. The fact that the bot could identify that the user wants a new email account out of the whole conversation is called identifying the intent.

Conducting a conversation is an extremely difficult task for even humans, for everyone interprets a spoken sentence according to their own understanding of language, past experiences, etc. This is one of the main reasons chatbots misunderstand, or are unable to understand user sentences. Over a period of time, there has been paradigm shift in how chatbots understand and respond to human queries. These paradigms are classified into three generations (figure 2).

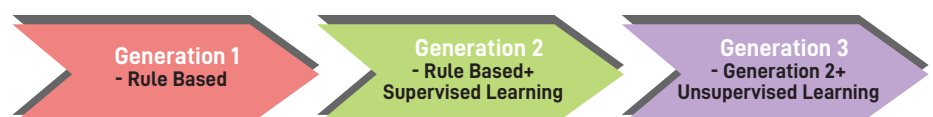


Figure 2- Chatbot Generations

## GENERATION 1

Based on simple written rules, chatbot handles only the specific rules that are known to it. If the user says something other than what is known to the chatbot, it results into a failure condition.

## GENERATION 2

Based on supervised machine learning, one needs to label the training data and then train a model to learn how to accordingly respond to the user. This also needs a lot of labelled training data. The more a model is trained, the more accurate responses to the user are.

## GENERATION 3

Based on adaptive unsupervised learning, the AI Chatbot can learn from unlabelled data. This generation generally combines the benefit of previous generations. It can use rules and labelled data and the ability to learn from many unlabelled data to handle more complex conversations.

## GENERIC FEATURE REQUIREMENT IDENTIFICATION

A number of features can be implemented in an e-Gov services scenario for a chatbot:

- Identification of the issue
- On the spot solution
- Raising tickets for grievances
- Authentication
- Chat transfer to a human agent as a fall-back mechanism
- Voice chat
- Status/ Results
- Analytical Dashboard (Only for analysis purposes – not for user)
- Sentiment and Mood Analysis (not directly used by the end user)
- Accessible from different media like Web, Mobile App and even from an ordinary mobile phone through voice

## CHATBOT FRAMEWORK IMPLEMENTATION - TECHNOLOGY (figure 3)

### UI+Business Logic Layer

It is the point of interface with the user. All the business logic, validations, and exception handling are implemented here.

### Middle-ware Layer

Works as an API Manager – manages the

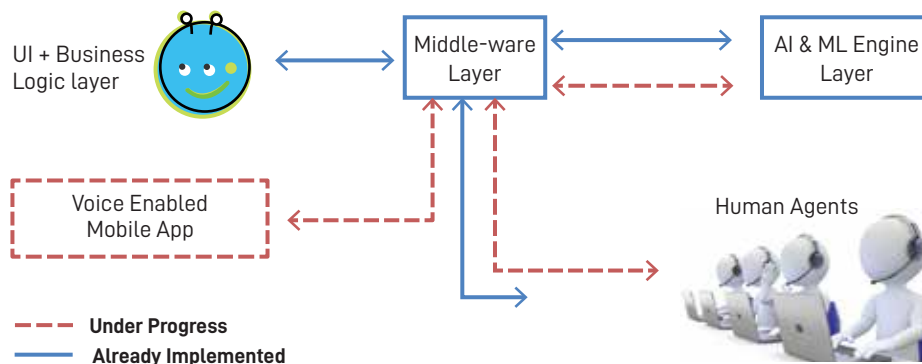


Figure 3 - Chatbot framework implementation

communication between UI layer and back-end AI engine via APIs, and also manages the chat transfer mechanism with the human agent.

### AI Engine

Heart of the whole application, takes the user input in natural language format and classifies it into a specific problem-subproblem domain.

### Human Agents

Work as a fall-back arrangement in case the engine failed to classify the given user input into any specific problem domain.

## FEATURES CURRENTLY IMPLEMENTED IN VANI (VIRTUAL ASSISTANT OF NIC)

VANI is a Chatbot of NIC which is having the following implemented features

- Identification of the issue
- Raising tickets for grievances
- OTP Authentication
- Chat transfer to a human agent as a fall-back mechanism
- Analytical Dashboard

## UPCOMING FEATURES

The following features are currently in testing phase, and will later be released in pilot mode to gauge user acceptance:

- Voice Chat (as a Mobile App like a WhatsApp voice chat) and would also be available on the voice enabled IVRS (Interactive Voice Response System)
- On the spot solution (instead of raising tickets directly, where applicable)

## USE CASE IMPLEMENTATION

VANI is currently employed for help-desk services at [servicedesk.nic.in](http://servicedesk.nic.in).

In its current form, VANI recognises and classifies the specific user problem, and its subproblem, from the user text received. It was decided to design the engine in a way where each main problem category like Email, VPN, AEBAS, Network etc., was imagined as a container, and their subcategories were like objects inside the container. Much like the Figure 4.

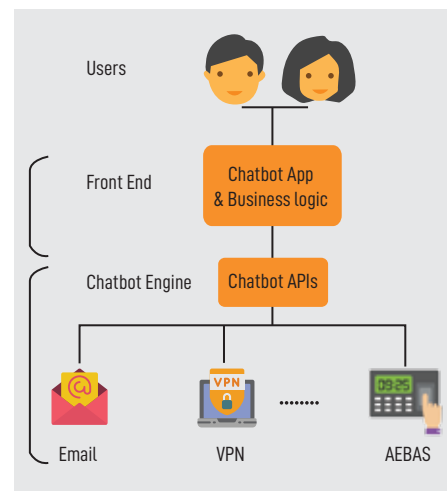


Figure 4 - Use case for [servicedesk.nic.in](http://servicedesk.nic.in)

## POTENTIAL FOR E-GOV

VANI sees its application in a number of ventures that are run for the citizens such as application statuses, info foraging, grievance and redressal.

For further information, please contact:

**VARINDRA SETH**  
Sr. Technical Director & HoD  
NIC IVRS service-desk Chatbot & Voicebot  
NIC HQ, CGO Complex, Lodhi Road  
NEW DELHI 110003  
Email: [seth@nic.in](mailto:seth@nic.in)  
Phone: 011-24305242



# WEBGL AND THREE.JS

## 2D/ 3D graphic rendering Javascript API

**WebGL (Web Graphics Library) 1.0 is one of the Javascript APIs for rendering interactive 3D and 2D graphics within any compatible web browser without the use of plug-ins. There are many Javascript libraries that abstract WebGL and result in higher code level. One of the utility libraries is Three.js, the most popular 3D library/ API that runs alongside feature-rich HTML5 to create and display animated 3D computer graphics in a web browser.**

**G. PRASAD**

Sr. Technical Director  
gprasad@nic.in



**RICHA TIWARI**

Scientist -B  
richa.tiwari@nic.in

Edited by  
**MOHAN DAS VISWAM**



Computer Graphics have been part of the advent of the latest technology in ICT. Initially, web browsers were not planned for 3D graphics applications, but were designed for rendering simple web pages with static content.

With the use of dynamic content and scripting languages, the demand for 3D graphics support in browsers has grown immensely. 3D graphics is playing an important role in user's multimedia desktop as well as web experience. There are different technologies used for rendering 3D objects in browser such as VRML, ShockWave, Flash, Silverlight, QuickTime and others. But, these technologies require browser plugin to be installed and there is no standardization for creation of these plugins. So, different plugins are required for rendering 3D Objects with different technologies, which results in installing multiple plugins in the browser. Sometimes, it leads to compatibility issues among plugins. WebGL (Web Graphics Library) 1.0 is one of the Javascript APIs for rendering interactive 3D and 2D graphics within any compatible web browser without the use of plugins. Sometimes, WebGL API may be tedious to use directly without any utility libraries. There are many Javascript libraries that abstract WebGL and result in higher code level. One of the utility libraries is Three.js, the most popular 3D library/ API that runs alongside feature-rich HTML5 to create and display animated 3D computer graphics in a web browser.

### WEBGL (WEB GRAPHICS LIBRARY)

Web Graphics Library (WebGL) is one of the most important new technologies facilitating 3D visualisation on the browser platform. It is a cross-platform, royalty-free web standard for a low-level 3D

graphics API. WebGL API is essentially a set of JavaScript functions which wrap around the OpenGL ES specification. It uses canvas element of HTML to render objects in browser. The HTML Canvas provides a destination for rendering 3D objects in web pages, and allows performing that rendering using different rendering APIs.

WebGL has compatibility and independence with underlying operating systems as it adopted web browsers as the content providing platform. Web browsers can provide overall programming interfaces, which are independent of underlying hardware, middleware, graphics library, and so on. A WebGL program can be executed on every platform, where a WebGL compatible web browser is available.

### HOW WEBGL WORKS

WebGL programs are written in JavaScript language and embedded into HTML5 documents. The JavaScript codes call the WebGL API functions to finally get 3D output on the web browser. JavaScript sets up the initial data structures and sends them to the WebGL API, which sends them to OpenGL ES (OpenGL for Embedded Systems). The graphics driver supplies the implementation of OpenGL ES that actually runs the code. Finally, it is to be sent to the graphics hardware.

At the core of the WebGL technology are scripts known as shaders which are the small program written in GLSL that defines how the pixels of 3D object is drawn on the screen. There are two shaders in WebGL - vertex and fragment shader. The shaders are responsible for position calculation and colour specification respectively. The vertex shader converts the coordinates of the 3D model into 2D screen coordinates. It performs per-vertex computation. The fragment shader is responsible for generating colour output of each pixel. It performs per pixel commutation.

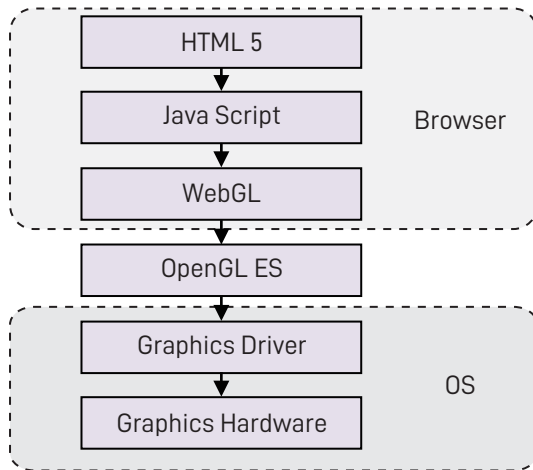


Fig 1. WebGL/ OpenGL ES/ OS interactions

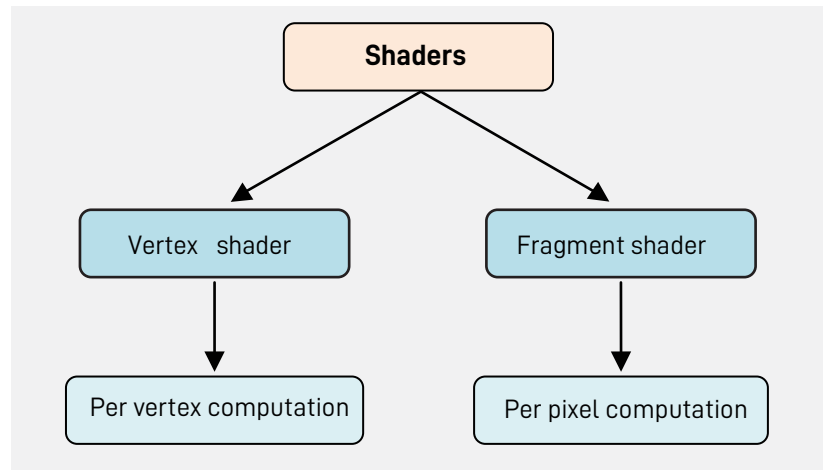


Fig 2. WebGL Shaders

## THREE.JS

The development of interactive 3D graphics program based on WebGL is sometimes complicated and time-consuming as it requires deep understanding of the library. To resolve this issue, there are a number of utility libraries such as Three.js, Babylon.js, A-Frame, SceneJS etc., which are built upon WebGL and provide framework for easy development of 2D and 3D graphic rendering applications. Among these libraries, 'Three.js' is probably the most widely used open source library (<https://threejs.org>). The source code is hosted in a repository on GitHub (<https://github.com/mrdoob/three.js>). It is made available under the MIT license. The official documentation of Three.js is under construction, but it guides beginners very well to start with 3D graphical rendering application. Three.js is

internally generating WebGL code while exposing a simpler API. Three.js also has pre-built components and helper methods that help to get things done faster.

## APPLICATION AREAS

Today, 3D computer graphics have a vast domain of usage in different applications. They are used for 3D product design, gaming, city planning, disaster management, geo-spatial mapping, digital marketing, architect, medical imagery, education, fashion designing, art etc. Some of the examples where WebGL is being used are:

- Sony PlayStation 4 uses WebGL to render the user interface
- Google releasing demos under the chrome experiments collaborating with numerous world titles and developers
- Poly Google (<https://poly.google.com>) uses WebGL for 3D rendering

- Ironbane (<http://play.ironbane.com/>) is a massively multiplayer online game powered by WebGL and Three.js. One can collect items, interact with other players and explore the open world
- 360 degree viewer (<http://carvisualizer.plus360degrees.com/threejs/>) for detailed car visualization with textures and environment mapping.

NIC has developed the 3D Web Viewer, 'e-CollabCAD' using Three.js technology. e-CollabCAD Web Viewer (<https://collabcad.gov.in/eCollabCAD/>) is a product for visualization and sharing of 3D design data of CollabCAD and open 3D data file formats (STL, OBJ, JSON). No software or plugin is required as the viewer works directly on WebGL compliant web browsers. User can upload, view and share 3D models and innovative designs with public. Number of visualization and rendering features have been provided in e-CollabCAD viewer. These include, 3D model viewer, shading (wireframe, facets), environment mapping, setting perspective and orthographic camera views, applying color gradients, setting different view.

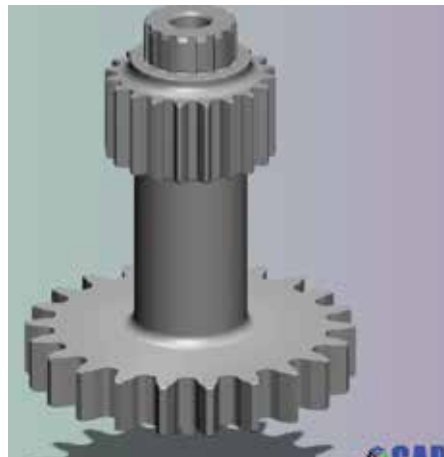
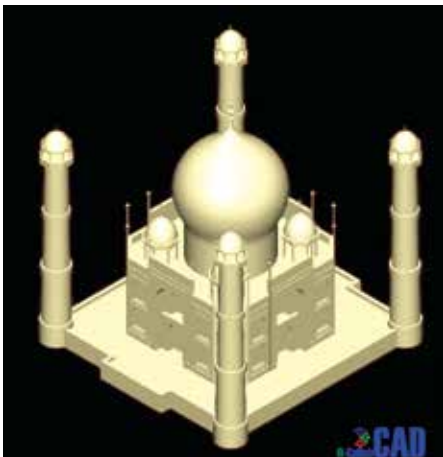


Fig 2. WebGL Shaders

For further information, please contact:

**GUNTUKU PRASAD**  
Sr. Technical Director  
CollabCAD Development Group, NIC HQ  
CGO Complex, Lodhi Road  
NEW DELHI - 110003

Email: [gprasad@nic.in](mailto:gprasad@nic.in)  
Phone: 011-24305177

# Appscape

Along with changes in the internet and world wide web technologies, services offered by mobile devices in different domains are also changing. The development of applications is moving towards mobile first strategy, which promotes Responsive Web Design, Progressive Advancement (develop first for low-end browsers first) and Graceful Degradation (cut down some of the non-essential functionalities). Smart phones are becoming smarter with the advent of technologies like context aware computing and wearable technology. Over the last decade, mobile technologies have established their prominent presence for serving government and citizens through m-Governance. NIC repository of mobile applications is continuously growing with more than 230 mobile apps uploaded on play store (Google and iOS) till date.

This issue of Appscape covers some of the more popular mobile apps, launched recently. These mobile apps belong to different sectors such as Administration, Social Development, Finance, Public Distribution, Health and Education. PARIVESH mobile app helps users track and view the current status of their proposals. AASRA App is for Slum Rehabilitation Authority Mumbai. Rubber Kisan is a generic mobile app to get rubber related information. PSCADB Mobile App allows access to financial information and statements in a secured manner. Ente Rationcard provides ration card details for Civil Supplies department, Government of Kerala. CGHS Service Feedback is for submitting feedback on defined CGHS Services, and NSP Mobile App is developed for students' scholarships.

- C.J. ANTONY, NIC HQ



For Apps uploading queries:  
eMail: [mobileapps-nic@nic.in](mailto:mobileapps-nic@nic.in)  
Phone: 011- 2430 5494 (Deepak)

Visit the Mobile App Store  
<http://egovmobileapps.nic.in>

## PARIVESH

PARIVESH (Pro-Active and Responsive facilitation by Interactive, Virtuous and Environmental Single window Hub) is a mobile application developed by National Informatics Centre to facilitate the user Agencies and Project Proponents to easily track, view the current status of their proposals, reply the queries of processing authorities, access the agenda and minutes of the appraisal meetings as well as clearance letters. The App also helps Citizens/ Central Pollution Control Boards/ State Pollution Control Boards/ Pollution Control Committees and other concerned departments to view updated application status for environment/ forest/ wildlife clearances.

PARIVESH also helps the processing authorities for online uploading of geotagged images of the project location, which would further help in site inspection as well as faster appraisal process of the applicant proposals. This will in turn reduce the time of processing of the applications. PARIVESH, which can be installed on smart phones or tablets is available for both Android and iOS. This application can be downloaded from NIC's Appstore and other popular App stores.

Queries: [Anil Kumar \(anil.kumar@gov.in\)](mailto:anil.kumar@gov.in)



<https://play.google.com/store/apps/details?id=nic.ministry.com.parivesh>



## AASRA

AASRA is a mobile application developed by the Utility Mapping Division of NIC for Slum Rehabilitation Authority Mumbai. Created from the GIS portal, this application was launched by the Hon'ble Chief Minister of Maharashtra on 9th September 2018.

The core part of the GIS portal consists of the large scale basemaps (scale 1:1000) and Continuously Operating reference stations established for a ground accuracy of 7mm so that huts of sizes 7 feet by 5 feet can be mapped with desired accuracy. Thereafter, procedures and specifications are laid out for collection of secondary spatial data, collection of slum boundaries, huts and LIDAR survey. The information collected would thereafter be positioned accurately on the basemap.

AASRA App provides real time updated information to citizens, architects and huts owners of Mumbai city in a bilingual interface (English/ Marathi) on huts, proposed scheme, LOI and slum declaration 3C, based on their GPS location and otherwise. Geo-locator search is also possible from Hut ID, Village, Ward, Taluka, District, Cluster 2016 etc. This information, otherwise would have only been available by means of RTI or visiting the SRA offices. The App ensures transparency, efficiency, effectiveness for slum dwellers. This application is also being developed for iOS platform.

Queries: [Amit Bhargava \(bhargawa@gov.in\)](mailto:bhargawa@gov.in)



[https://play.google.com/store/apps/details?id=com.arcgis.esri.sra\\_citizen](https://play.google.com/store/apps/details?id=com.arcgis.esri.sra_citizen)

## Rubber Kisan

Rubber Kisan is a mobile Application developed by NIC, Kerala for Rubber Board, India. It is a generic App which delivers the following information to rubber growers:

- ❖ **Domestic market rubber price-** Daily & weekly price, monthly average and yearly average prices in real time, price of different grades of rubber produced domestically.
- ❖ **International market rubber price-** Daily price of various international rubber grades from BANGKOK and KUALA LUMPUR. Option to find daily, weekly, monthly average and yearly average in the international grades.
- ❖ **Cultural Operations-** Delivers the location specific cultural operations in different agro-climatic regions in the country by selecting states, district etc.
- ❖ **Contact details-** Location-specific office addresses and contact details for farmers.
- ❖ **Rubber Alerts-** Season specific alerts are issued by various line departments to get real-time intimation from the Board. Currently, the updated data of only Kerala State is available in the App.

Further enhancements of the App are ongoing and availing of the information from other rubber growing States in India is prioritized currently.

Queries: [T Mohan Dhas \(sio-ker@gov.in\)](mailto:sio-ker@gov.in)



<https://play.google.com/store/apps/details?id=in.gov.civilsupplieskerala.enterationcard>

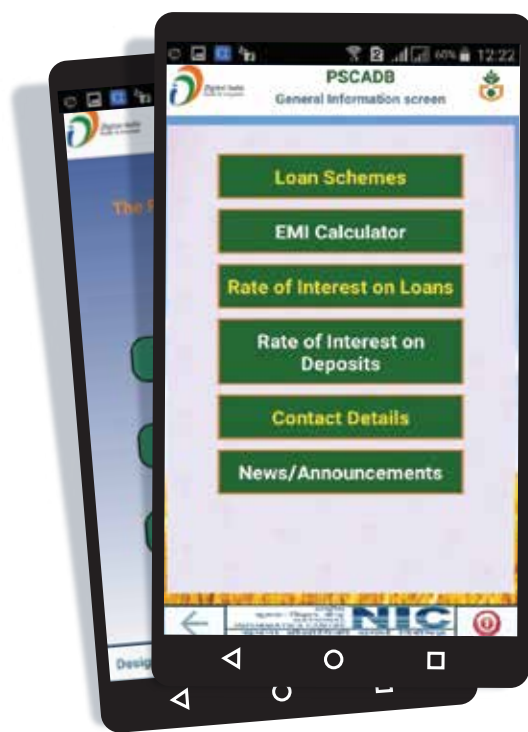
## PSCADB App

The Cooperative Core Banking Solution (CCBS) developed by NIC for Land Development Bank (LDB) runs in all the 89 branches of Punjab SCARDB, serving 10 Lakhs customers. The PSCADB Mobile App has been developed for existing as well as prospective customers of Punjab to enable them with an access to their related financial information and statements in a secured manner. This helps customers save time and do away with travel to reach bank from their village. The App is also intended to achieve the goal of financial inclusion.

PSCADB App features the following:

- ❖ Details of accounts like loan, share, type of deposit and others including account balance, date of opening, date of maturity, loan due date etc.
- ❖ Customer profile view
- ❖ Loan repayment schedule view
- ❖ Locate the PADB (Primary Agricultural Development Bank, PADB is the branch of Punjab SCARDB) which is the nodal branch/ agency to serve the farmers of that village, EMI chart, Rate of interest (ROI), Loan schemes parameters along with eligibility criterion, contact details of regional offices etc.
- ❖ Details of various loan schemes of farm and non-farm sectors, run by the government for inclusive growth of farmers.

Queries: *IPS Sethi (sethi@gov.in)*



<https://play.google.com/store/apps/details?id=pscadbank.com.pscadbapp>

## Ente Rationcard

Ente Rationcard, developed by NIC, PDS Team, Kerala, for Civil Supplies Department, Government of Kerala, was launched on 18th July 2018.

The salient features of the App are:

- ❖ **View the ration card details-** A citizen who possesses a ration card in the State can view his/her card details such as name, address, card type, family income, electrification status and list of family members.
- ❖ **Card History-** Application(s) submitted through e-services of Ration Card Management System (RCMS) will be listed along with ration card details. The details include application number, date, service requested and status of the application.
- ❖ **Multilingual-** Ration cards issued in multiple languages can be viewed in their local languages (Malayalam/ Tamil/ Kannada).
- ❖ **Monthly Ration Quota-** The monthly entitlement of ration commodities for the card holder based on the card type will be available in the App.
- ❖ **Application Status-** The status of any application submitted through e-Services of RCMS in the State can be obtained by providing the respective application number. The App provides the ration card number, taluk supply office/ city rationing office, application number, date and the application status such as pending for verification, approval etc.

Queries: *T Mohana Dhas (sio-ker@gov.in)*



<https://play.google.com/store/apps/details?id=in.gov.civilsupplieskerala.enterationcard>

## CGHS Service Feedback

This QR code based mobile App has been developed for CGHS beneficiaries to submit their feedback on defined CGHS Services. The Chief Medical Officer (CMO) In-Charge of a Wellness Centre (WC) can generate QR code for his/ her wellness centre, take a printout and display at a suitable place in premises. Using this App, the CGHS beneficiaries can scan the QR code and submit their feedback on the defined CGHS services. The App can be downloaded from Google Play Store.

CGHS beneficiaries can submit their feedback on the following services:

- ❖ Registration of beneficiary
- ❖ Consultation with medical officer/ specialist
- ❖ Dispensing of medicines
- ❖ Dressing room services
- ❖ Cleanliness of Wellness Centre
- ❖ Punctuality of staff
- ❖ Behaviour of staff

A beneficiary can provide the rating from 1 to 5 and have the provision to enter feedback on ratings less than or equal to 3. The rating on various CGHS services will be monitored by CGHS officials to improve the services. This facility is available for the CGHS beneficiaries whose mobile number is registered in the CGHS database.

Queries: [PawanYadav \(pawan.yadav@gov.in\)](mailto:pawan.yadav@gov.in)



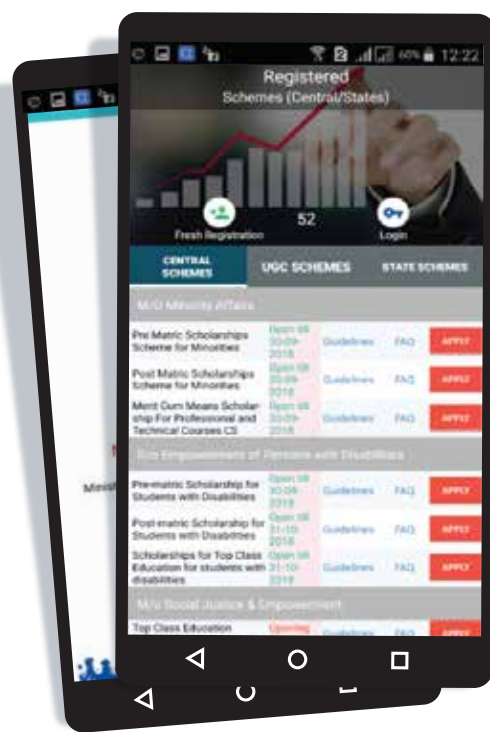
<https://play.google.com/store/apps/details?id=in.rajesh.mybarcode>

## NSP Mobile App

This is a single unified National Scholarship Portal (NSP), developed by NIC under the Digital India Programme for online application submission, verification and final disbursement of scholarships directly into students' bank accounts through DBT. NSP Mobile App was developed by NIC and launched on 13th September 2018 to further expand and facilitate the NSP services to far-flung students living in remote locations. This portal also aims to ensure smooth, accessible, end-to-end and hassle-free scholarship system for students belonging to poor and weaker sections. The App provides following features:

- ❖ **Scheme Display:** NSP App displays all scholarship schemes (Central, UGC and State along with deadlines, guidelines and FAQs).
- ❖ **Student Registration:** For availing schemes, students can enter their details, scheme type, bank account etc., and get themselves registered. SMS alert(s) along with application ID are sent to student(s).
- ❖ **Student Dashboard:** Enables a student to view the progress of application and status of application at various stages of application life-cycle.
- ❖ **Application form:** Students can fill entire application forms, detailing registration, academic and basic information. The App provides user-friendly interface for entry/ submit and download of filled application form in PDF.

Queries: [Shashi Bhushan \(bhushan@gov.in\)](mailto:bhushan@gov.in)



<https://play.google.com/store/apps/details?id=in.gov.scholarships>



# National Awards for Excellence in Rural Development



**T**he Ministry of Rural Development has presented the National Awards to recognize outstanding works carried out by the States, Districts, Blocks, Organizations and Individuals in implementation of various Programmes of the Ministry of Rural Development in 2017-18. The Awards were given away during a function on 11th September, 2018 at Vigyan Bhawan, New Delhi. The Hon'ble Union Minister of Rural Development, Panchayati Raj & Mines, Shri Narendra Singh Tomar, presented the awards, in the auspicious presence of Shri Ram Kripal Yadav, Hon'ble Minister of State, Rural Development. A total of 228 Awards were given under different categories to the States, Districts, Blocks, Organizations and Individuals.

NIC also bagged several awards. Some of the officers receiving the awards are pictured here.

**A** Department of Social Welfare, Manipur State & NIC for its outstanding efforts in implementing 100% Direct Benefit Transfer (DBT) under NSAP using NSAP-PPS (Pension Payment System) application of NIC.

**B** Assam State & NIC awarded for outstanding efforts in implementing 100% Direct Benefit Transfer (DBT) under NSAP with technical support from NIC.

**C** Himachal Pradesh State & NIC awarded for innovative Best Practices in Implementation of National Social Assistance Program(NSAP) for e-Kalyan Software developed by NIC.

**D** Bihar State & NIC awarded for its outstanding efforts in implementing 100% Direct Benefit Transfer (DBT) under NSAP.

# e-Lets Digital Excellence Awards

**NIC Punjab receives Digital Excellence Award for efficient implementation of eOffice in the State of Punjab**



Shri Vijay Inder Singla, Hon'ble IT Minister and Shri Daves Moudgil, Mayor, Chandigarh, giving away the Award to Shri B.S. Saini(ASIO, NIC-Punjab), Shri Ajay Malhotra, TD(NIC) and Shri Pankaj Jain, PSA(NIC)



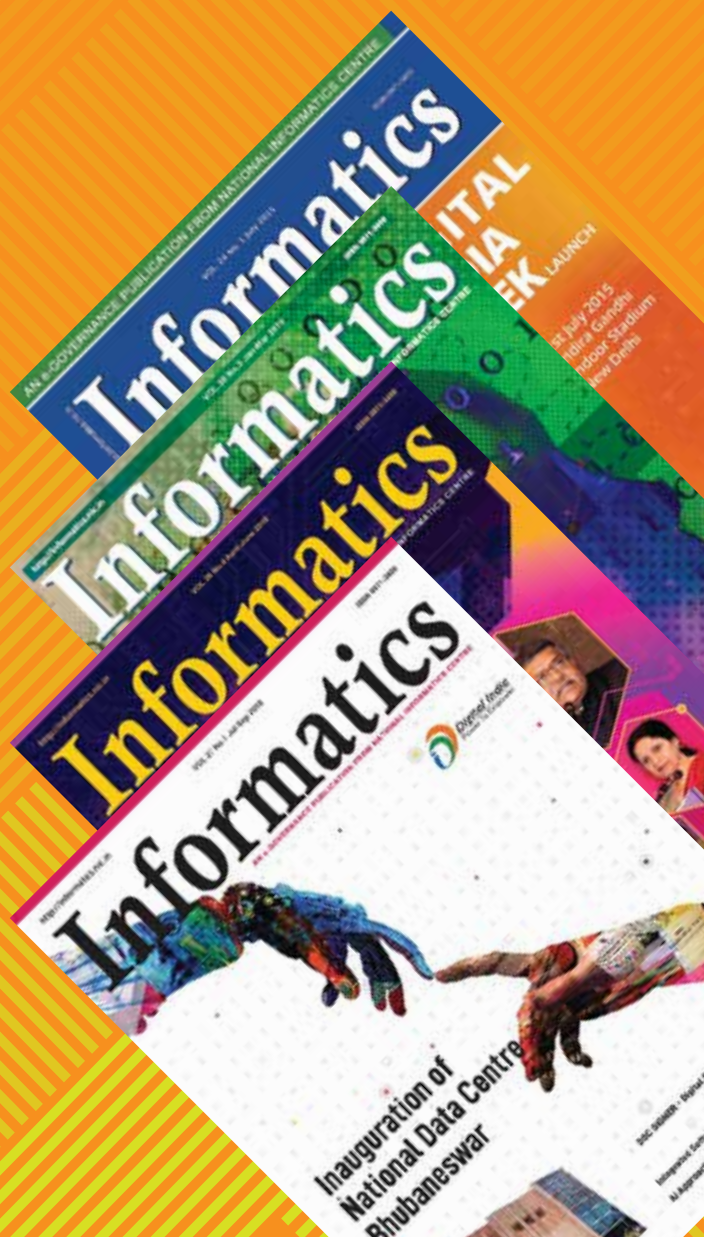
-Lets Digital Excellence Awards 2018 were presented during a conclave held at Hotel Taj-Chandigarh on 30th August, 2018.

In the beginning, the implementation of eOffice was initiated in Punjab during 2013-2014 in District Collectorate Office, Mansa. Thereafter, it has been replicated in the rest of 21 Districts of Punjab State, MILK-LFED, Office of the Director, Governance Reforms (DGR), Punjab Municipal Infrastructure Development Corporation (PMIDC), Excise and Taxation Technical Services Agency (ETTSA) Punjab, Mahatma Gandhi State Institute of Public Administration – Chandigarh, Punjab Raj Bhawan and Central Board of Indirect Taxes and Customs.

Read

previous issues of  
**Informatics**  
at the website:

<http://informatics.nic.in>





## DG, NIC Welcomes the Deputy Prime Minister of Kazakhstan on his visit to NIC



15-member delegation from the Government of Kazakhstan, led by Deputy Prime Minister Mr. Askar Zhumaghaliev, visited NIC Shastri Park Data Centre on 20th September 2018.

Smt. Neeta Verma, DG(NIC), welcomed the Dy. Prime Minister. In her opening remarks, she spoke about eGovernance initiatives taken by NIC under Digital India Programme. She said, "NIC, over the years, has developed many generic, configurable e-Governance applications and products which could be implemented in other countries with minimum efforts. NIC has also developed expertise in setting up of Cloud infrastructure and National Data Centres across India to provide safe and secure hosting infrastructure for e-Governance applications."

DG(NIC) also spoke on Digital Kazakhstan programme and mentioned about the possible support of NIC to the Government of Kazakhstan in implementing various e-Governance applications. Shri D C Misra, DDG(NIC) gave a presentation on NIC



Smt. Neeta Verma, Director General, NIC, in conversation with Mr. Askar Zhumaghaliev, Deputy Prime Minister, Kazakhstan

e-Governance Products and Services. A detailed presentation was made on National Data Centre and Cloud services by Smt. Shalini Mathrani, DDG(NIC). A concluding presentation was given on National Government Networks established by NIC including NICNET and NKN by Smt. Seema Khanna, Senior Technical Director.

The delegation visited NKN Centre, NIC Data Centre, NIC-Cert and NIC Development Centre after witnessing the presentation.

- IPS SETHI, NEW DELHI

## Nagaland CM Dashboard launched by Hon'ble Chief Minister



Chief Minister's Dashboard (<https://nl.cmdashboard.nic.in>) was launched on 13th August, 2018 at the Secretariat Conference Hall of Nagaland by the Hon'ble Chief Minister of Nagaland, Shri Neiphiu Rio. The programme was chaired by Shri Temjen Toy, IAS, Chief Secretary, Govt. of Nagaland.

Commissioner & Secretary to the Chief Minister, Shri Abhishek Singh, IAS, delivered welcome address and deliberated upon some of the projects and schemes onboard the CM Dashboard. The launch ceremony was graced by the presence of Director General, NIC, Smt. Neeta Verma, Shri D.C. Misra, DDG(NIC), Shri I.P.S. Sethi, DDG(NIC), and Shri Ajay Gopal Bhartiya, Sr. Technical Director, PMU-DARPAN, NIC Lucknow (State Unit), Uttar Pradesh, via Video Conference.

On launching the CM Dashboard, Hon'ble Chief Minister urged all to work and contribute towards this initiative in a constructive manner. He congratulated the DG(NIC) and Nagaland State Centre officials for their valuable support to his government. The DG(NIC) briefed about various Digital Governance services of NIC along with the service of the CM Dashboard. She mentioned, "The CM Dashboard provides a finished record of all the important programs and schemes of the government. The



Hon ble CM, Shri Neiphiu Rio (C) along with Dy CM, Shri Y Patton (R) and Shri Temjen Toy, IAS, CS, Nagaland (L)

advantage of the service is that it enables one to use the program with their own indicators, benchmark and customization." She urged the Government of Nagaland to consider in approving the district-wise dashboard down the line for a single window, where they could get an access to all the programs and performance at the district level also.

The SIO(NIC), Shri Hemanta Kr. Saikia gave a slide presentation and pointed out the challenges involved in putting analytical data comprehensively together in a single window. He also said since the manual collection of data was prone to errors, there was a need to have a comprehensive single window.

eNPS System of the Finance Department of Govt. of Nagaland was also launched during the program.

-NOVOTSONO, NAGALAND



## Hon'ble Union Minister of E&IT Appreciates NIC Himachal's SWaaS Websites Migration of all Districts of the State



Shri Ravi Shankar Prasad, Hon'ble Union Minister of Electronics & IT, Law and Justice visited Shimla on 2nd July 2018 to lay the foundation stone of the new building of the Software Technology Parks of India. During the inaugural function, he highlighted various ICT activities which can be adopted by the State of Himachal Pradesh to become a role model for the Digital India programme.

Shri Jai Ram Thakur, Hon'ble Chief Minister, Himachal Pradesh, in his speech, mentioned the achievement of the State in migrating all District Administration websites to the SWaaS platform in a record time of just one month, with the help of NIC State and District officers. Himachal became the first State in India to migrate all the District Websites to SWaaS in May 2018. Hon'ble Chief Minister, Himachal Pradesh conveyed this fact to the Hon'ble Union Minister in a DO letter.

Shri Ravi Shankar Prasad praised the role of State Government and NIC Himachal Pradesh for achieving this feat of SWaaS migration. A movie prepared by NIC HP on SWaaS migration of all District websites was played in the STPI inauguration programme. Dr. Ram Lal Markanda, Hon'ble Minister of IT, Shri Kishan Kapoor, Hon'ble Minister of Food & Civil Supplies, Shri Suresh Bhardwaj, Hon'ble Minister for Education, Shri Onkar Rai, Director General(STPI), Shri Rajiv Kumar, Joint Secretary(MeitY), Dr. Shrikant Baldi, ACS to CM,



Shri Ravi Shankar Prasad, Hon'ble Union Minister during his Shimla visit

and Shri J.C. Sharma, Principal Secretary(IT), HP Government were present on the occasion.

SWaaS helps to create accessible websites of districts with minimal efforts. It provides a tool to design latest industry standard website. NIC Himachal Pradesh is also assisting Districts of other States to migrate their websites on SWaaS.

Shri Vinod Kumar (DIO, Hamirpur) and Shri Vijay Kumar (DIO, Sirmaur) were presented with appreciation certificates for their key role in migration of websites to SWaaS. The NIC SWaaS team provided complete technical support to NIC HP team in this endeavour. All DIOs and ADIOs took this activity as a challenge and completed the task. Shri Sanjay Sharma, TD coordinated the activity at State level.

-AJAY SINGH CHAHAL, HIMACHAL PRADESH

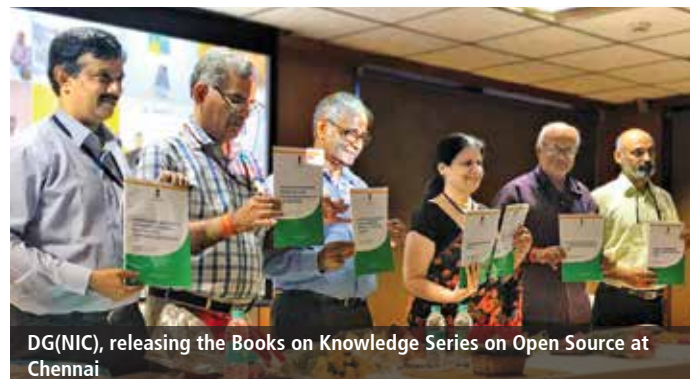
## Knowledge Series Books on Open Source Software Released



NIC has prepared Knowledge Series Books covering best practices, case studies, Open Source Stack and emerging technological choices for application development. The series on Open Source Software was launched on 30th July 2018, during the inauguration of the new block of NIC in Rajaji Bhavan, Chennai.

Smt. Neeta Verma, DG(NIC), in the presence of Shri HP Sharma, DDG, Shri DC Misra, DDG, Shri VS Raghunathan, DDG, Shri RS Mani, DDG and Shri Srinivasa Raghavan, DDG, inaugurated the Series which contained nine books.

The Knowledge Series Books are aimed at sharing knowledge and experience among the e-Governance Application stakeholders. The books cover various use cases, deployment choic-



es and replication of data in Relational Database Management systems which provide the mechanism for assessment of current deployments. The books on the application development explain the emerging choices that can be adopted for new projects.

-S P KARTHIKEYAN, CHENNAI

## Union Minister, E&IT, Shri Ravi Shankar Prasad visits Kolkata



on'ble Union Minister of Electronics & IT and Law & Justice, Shri Ravi Shankar Prasad visited Kolkata on 4th August 2018 during his transit to Patna.

The Hon'ble Minister was welcomed by Shri R.H. Khan, SIO, NIC(WB), along with other senior officials of various organizations of MeitY. The Minister was briefed on the status of implementation of e-Office in 50 Secretariat Departments, 17 Directorates, other Govt. bodies and 2 Districts, implementation of e-Procurement in all departments and all directorates, corporation offices of West Bengal with tender value of more than 5 lakhs.

SIO further informed the Minister that e-Procurement has been integrated with UPLMS (Unified Project Life Cycle Management System) for monitoring all infrastructure related projects of GoWB. Shri Khan mentioned about the implementation of ePrison system in all 58 correctional homes of West Bengal. Answering the query of Hon'ble Minister on the Video conference facility of production of inmates from prisons to court, Shri Khan explained on availability of the facility in 10 District Jails and all District Courts of West Bengal.



Hon'ble Minister, Shri Ravi Shankar Prasad with SIO, NIC(WB), senior officials of NIC(WB) and Departments of MeitY

SIO, WB mentioned that single window system for all citizen centric schemes including NOC, Licenses etc., of Labor Department, GoWB has been implemented for EoDB (Ease of Doing Business). e-Abgari (winner of National e-Governance Award), which is a workflow based software system for Excise Department, developed by NIC, WB is being productized for implementation in other states such as Sikkim, Tripura, Assam, Punjab and Maharashtra.

- MOTIUR RAHMAN, KOLKATA

## Punjab Transport on Path of Transformation



With the successful roll out of VAHAN4.0 and SARATHI4.0, the Mission Mode Projects, Punjab Government, under the visionary guidance of the Hon'ble Chief Minister Capt. Amarinder Singh, is all set to carry out "radical transformation", equipping the concerned authorities with latest equipment, in keeping with changing times. Smt. Aruna Chaudhary, Hon'ble Transport Minister, Punjab, while chairing a high level meeting with Department of Traffic, Transport and National Informatics Centre, Punjab, expressed her views.

Smt. Chaudhary said, "e-Challaning machines' and 'breath alcohol analysers' will soon be a reality across the state which would use National Informatics Centre(NIC) software and be independently connected to e-Challan application. Further coming to the issue of overloading, automated weigh in bridges having connectivity with NIC would be roped in to avoid loss to exchequer."

The Department of Transport, Government of Punjab, is being



Smt. Aruna Chaudhary, Minister of Transport, Punjab discusses with ADGP Traffic and other officials

supported by the NIC Punjab Transport team, headed by Shri Sarbjit Singh, Sr. Technical Director. The team also consists of Shri Narinder Singh, Technical Director and Shri Tarminder Singh, Scientist-D, and remains under the able guidance of Shri Satyender Kumar, DDG & SIO(Punjab).

-PARMINDER KAUR, PUNJAB



## e-Hospital Inaugurated by Hon'ble CM, Madhya Pradesh at District Hospital, Satna



Hon'ble Chief Minister of Madhya Pradesh, Shri Shivraj Singh Chouhan inaugurated the *e-Hospital@NIC* for District Hospital of Satna on 18th July 2018.

Hon'ble Member of Parliament, MLA(Satna), Mayor (District Satna), District Magistrate and several other dignitaries were present on the occasion. Hospital authorities have appreciated the work of NIC(Satna) for successful implementation of e-Hospital. On this occasion, DIO(Satna) briefed the gathering about the working and benefits of *e-Hospital@NIC*.

*e-Hospital@NIC*, a Cloud enabled Hospital Management System is a workflow based ICT solution for hospitals in Government Sector. This is a generic software which covers



Hon'ble Chief Minister reviewing e-Hospital system presented by NIC team

major functional areas such as patient care, laboratory services and work flow based document information exchange. In the first phase of implementation, modules such as OPD Registration, IPD Registration, Billing System and Pathology Lab are covered, whereas the Online Registration System, Pharmacy and Online Blood Bank System would be covered in the subsequent phase.

- SUCHEETA KAK, MADHYA PRADESH

## Hon'ble Chief Minister, Himachal Pradesh Launched 'Write to Chief Minister Interface' of e-Samadhan



Shri Jai Ram Thakur, Hon'ble Chief Minister, Himachal Pradesh, launched the integrated 'Write to Chief Minister Interface' of e-Samadhan on 20th July 2018 at Shimla. The Chief Secretary(HP), ACS to CM(HP), ACS Finance, Additional Principal Secretary to CM, all Secretaries, Head of Departments were present in the launch ceremony. Shri Ajay Singh Chahal, SIO(NIC-HP) and other NIC Officers such as Shri Sandeep Sood, TD, Shri Sanjay Thakur, Scientist-D and Shri Parveen Sharma, Scientist-B were also present during the occasion.

The NIC(HP) has developed this interface by integrating the CM-REFNIC software with e-Samadhan and adding functionalities for 5 other kind of applications which can be directly sent to the Hon'ble Chief Minister. These are employment related applications, seeking financial assistance, lodging complaints, inquiries and development works in addition to grievances. The CM announcements (reference types) and other kinds can also be sent to e-Samadhan for online redressal by the concerned Departments.

The existing e-Samadhan software is available to general public and through the 'write to Chief Minister' interface, the public



Hon'ble Chief Minister(HP) launching the eSamadhan Interface of CM Dashboard

can directly interact with the Hon'ble Chief Minister, whose office can track the progress of these issues electronically. The time to receive and deal with any application will be reduced and paperless flow of application from Secretariat level to concerned office will also be time effective and can be properly monitored.

The Hon'ble Chief Minister, in his address, urged all the Departments to meticulously respond to the electronic PUCs being sent to them through this interface.

Shri Ajay Singh Chahal made a presentation on the new interface of e-Samadhan.

-AJAY SINGH CHAHAL, HIMACHAL PRADESH





Release of NPP Brochure during the inaugural ceremony of workshop

## Workshop on National Power Portal (NPP) held in New Delhi

A workshop on National Power Portal(NPP) was organized by National Informatics Centre(NIC) jointly with Central Electricity Authority(CEA) on 27th September 2018 at the Convention Centre, Scope Complex, New Delhi. Delegates and participants from Power Finance Corporation(PFC), Rural Electrification Corporation, Generation, Transmission and Distribution utilities from all over the country attended the workshop.

The inaugural session was chaired by Shri Ajay Bhalla, Secretary (Power) in the presence of Shri Pankaj Batra, Chairperson (CEA), Smt. Neeta Verma, DG(NIC), Shri PS Mhaske, Member (Power System), CEA and Shri GK Gaur, DDG(NIC). Vote of Thanks

was given by Shri Adarsh Saiwal, Sr. Tech. Director(NIC).

The Secretary(Power) appreciated NPP and emphasised its significance. DG(NIC) elucidated the emerging technologies and their relevance in addressing issues of the power sector. DDG(NIC) explained the scope, coverage, architectural overview, design and functioning of NPP. A brochure on NPP was released by the Secretary on the occasion and a short film on NPP was also screened to the participants.

National Power Portal is a centralized system developed for Indian Power Sector to facilitate online data capture on daily/ monthly/ annual basis from various generations, transmission and distribution utilities of the country. It also disseminates information on capacity, demand, supply, consumption etc., through various analysed reports, graphs/ charts, statistics for the Central/ State Governments, besides the Private Sector.

-RAM KRISHAN, NEW DELHI



Participants of the 4th Conference of Asia Pacific Public Electronic Procurement at the Inter-American Development Bank HQ, Washington DC

## GePNIC presented at the 4th Conference of Asia Pacific Public Electronic Procurement Network

The GePNIC system developed by NIC was presented at the 4th Conference of Asia Pacific Public Electronic Procurement Network (APPeN) held at Washington DC, from 18th to 20th September, 2018. During the conference, key players from around the world shared best practices, enabling the participants to learn latest trends on how technology is helping leverage public procurement as a devel-

opment tool in various regions.

Smt. Padmavathi Viswanathan, DDG(NIC) and Shri Srinivasa Raghavan K, DDG & SIO, NIC(Tamil Nadu) were deputed to participate in the conference. A presentation on "The business model for implementing GePNIC System of India" was made by Smt. Padmavathi, with a focus to market the GePNIC software. A technical presentation on GePNIC was given by Shri Srinivasa Raghavan.

Representatives from over 80 countries participated in the 3-day long conference and shared details of implementation in the procurement front that are taking place across the globe.

- USHA SAXENA, NEW DELHI